

HENRI BERGSON

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TRANSLATOR'S NOTE

THE translation here presented of the lectures on Bergson and his doctrine given by Professor Chevalier at Grenoble University during the spring months of 1926, has been undertaken under his own eye and with his personal collaboration throughout. Had this valuable help not been available, the difficulty of the subject would have made it an impossible task for the present translator. Professor Chevalier's familiarity with the English language and his sympathetic understanding of the aims and ideals of the English-speaking races have often smoothed the way, and given additional interest and pleasure to the work of translation.

Wherever reference has been made to already existing authorized translations of Professor Bergson's work, the direct quotation has been given, although this has now and then occasioned slight differences in the interpretation of a terminology which the philosopher has made his own. Through the author's personal friendship and constantly maintained intercourse with his subject, sources of information, hitherto untapped, have also been directly available.

The translation of Bergson's criticism of the Einstein theory of relativity has been very kindly undertaken by Professor Chevalier's friend, Thomas Greenwood, M.A., F.R.G.S., of the University of London.

It should be noted that the term "spiritualism" is used throughout in its older and philosophical sense, as denoting a system which claims the independent existence of spirit as opposed to matter.

A list of Professor Bergson's works to which reference is made is appended. In the footnotes they are referred to in an abbreviated form.

LILIAN A. CLARÉ.

INTRODUCTION

THE pages which follow do not in any way aspire to be exhaustive, or even original. The circumstances which gave rise to them will sufficiently account for this characteristic, and will serve the author—at least he hopes so—as an excuse to those who may be inclined to reproach him on that score.

In the spring of 1924, a few weeks before the opening of the holiday courses for foreign students given every year by the Grenoble University, I was asked if I would devote six lectures to the philosophy of Henri Bergson. I agreed, but as a matter of fact, time was lacking to reread the philosopher's works in their entirety. Nor was it possible to set forth, in six lectures of an hour each, the intricacies of so vast a doctrine, the wealth of proofs and analyses it contains, and the vistas it opens up in all directions of human thought. For both these reasons I had to practice intellectual asceticism, and felt constrained to omit a very great deal. By concentrating upon, I will not say essentials, but upon certain aspects of Bergson's philosophy which were most familiar and congenial to me, because they had allowed of my handling its substance and arriving at its core, I might hope that my audience by pursuing the same path with me would reach it also. I therefore sought, by a kind of reflective self-communion, to live over again those

trains of thought whose vitalizing power and fertility had been tested in the depths of my own mind during a period of twenty years. They were indeed, the foundations of the thought by which I had lived, and which I had been reliving.

Now it turned out that this sparse and summary method of treating my subject, which circumstances had rendered necessary, fulfilled the aim of my teaching, and enabled it to touch, not merely the mind, but the heart. Hence arose the demand to which this book is a response.¹

I shall, therefore, endeavor to do as I have been asked, and preserve in the written word the original characteristics of freshness, spontaneity, and inward concentration which pleased my audience and impressed them with the feeling of that *something* which constitutes the very soul of a doctrine and the invisible principle whence all proceeds, the unseen point toward which all converges. This *something* is much more important than proof or argument or discourse, because it is the vital source of life by which the intelligence which makes use of them all is nourished. We may multiply reasons for loving without loving; reasons for willing without willing; reasons for understanding without really understanding. But while he who really understands, he who loves, or wills, cannot dispense with reasons, certainly—for that is impossible to mortals here below—he can to some extent free himself from them, dominate them continually, boldly make use

¹ It should be explained that the present work consists of the lectures of 1924, with amplifications as well as the additional matters given in substance at the *Cours Public* of the University of Grenoble, from January to March, 1926.—Translator's Note.

of them, and select from among them those which he judges best suited to express his understanding, his love, or his will. It may even happen that a single reason, or a single fact, provided that it goes to the root of the matter and is discerned by us in its essentials, may suffice. It may even attain its end better than a multiplicity of reasons in which the mind commonly expends its energy and loses sight of its aim. Is not, indeed, the essential thing to touch reality in its deepest depths upon *one* point, to comprehend *some* one thing thoroughly? After this the mind—every mind—will not find too much difficulty in enlarging its experience and, without repeating it, in extending it to other objects of experience by differentiating it from them. In its original experience it will have realized the fundamental unity and diversity of reality, since everything is connected with everything else in the universe, both visible and invisible, yet at the same time depends upon it on one special side, and causes us to approach it under one particular aspect.

Once again, the exposition which follows does not pretend to be *complete*, it aims merely at being accurate, i.e. at giving the real meaning of the Bergsonian teaching, its spirit and its method. In all human teaching whatsoever, that which actually matters is perhaps not so much the conclusions toward which it tends as the way by which one travels thither, and the spirit in which one has undertaken the search. All human conclusions are provisional. No man can boast of having come face to face with truth in this life. It would be presumption, it would be folly so to believe. And it would be a yet greater folly (although to-day it is a much more

common one) to believe that one can confine the whole truth in a system of concepts which are partial by their very definition. But in the love of truth and, still more precisely, in the way, peculiar to each human being, of loving the truth and searching for it, especially in the case of a mind and an intelligence of the first order, we have that which is not subject to age and decay and must mainly be demanded from a doctrine. This is what we shall first of all demand of Bergson's doctrine, well assured in this way of remaining faithful to its essential spirit, in spite of inevitable shortcomings in realizing it.

I might almost say, therefore, that it is *my* Bergson whom I present in these pages. I mean the Bergson whose image or spiritual physiognomy my memory has reconstituted and intimately preserved, neglecting certain traits, retaining certain others, following that law of affinity which regulates what we forget and what we remember. The law works in such a way that the object or the person we perceive is not the object in itself or the person in himself, but that something which, in either, is in profound accord or sympathy with ourselves. Now this affinitive memory certainly simplifies that which it preserves, as perception does, but since it is at any rate superior to mere intelligence and its processes of unlimited analysis, it gives us back the thing itself, not the parts of the thing, and by means of intellectual sympathy it restores the object in its entirety and with its own atmosphere. Thus, if I close my eyes, I can see within myself the Cathedral of Chartres as something much clearer and more lifelike than a reader who may have devoured every-

thing that has been written about it. It is, then, this inner view of Bergson, *my* inner view of Bergson, that I propose to give here; and now you will understand the sense in which I can say that it is mine, whilst I affirm, or at any rate hope, that it is not inaccurate, i.e. that it does not alter or distort the object it represents.

I was never actually Bergson's pupil. I entered the Lycée Henri IV and then the Ecole Normale at the very time he gave up teaching there. But at the Collège de France I attended his lectures for two years, and it was his two courses on the origin of our belief in causality and on our idea of time that first introduced me to his thought. Before that, I was acquainted with nothing of his save the first chapter of *Matière et Mémoire*, which I had been advised to read at the end of my philosophy course at Versailles. I had conscientiously made a résumé of the chapter without understanding it at all. Even to-day it is, of all Bergson's work, that which I feel least sure of having understood. While the book still remained a sealed one to me the teaching brought me the revelation which was lacking, and without which there is no real comprehension: the revelation of that which was within, the true inwardness of the thought. Better still, it revealed to me this essential truth: that behind the book we must look for the man. Behind the signs and symbols, the concepts and the terms employed, we must seek for the reality they express, since everything that exists possesses an inner side, and we do not know a thing, and certainly not a person, until we know that which is within. In this way I arrived not by the intellect alone, but by the

emotions and the intellect, at the idea of that "inwardness" which, to me, is the key to Bergsonism and, in a certain sense, to all philosophy.

What an immense advantage there is in the spoken word, an advantage too much neglected by our age of readers! To go no further than the domain of philosophy, it was this quality which assured the vitality and the permanence of Platonism and Aristotelianism. It is this, with very few exceptions, which brings us into contact with a mind and, through it, with a train of thought. A book is like a photograph: if I knew the original, it recalls him; if not, it is a dead letter to me; I am incapable of placing it, and myself with regard to it, and consequently I cannot really see the person it represents. The phrases and, still more, the way in which the words are uttered, the intonations, gestures, glances, and silences—all these interpret the mind most accurately and enable it to touch other minds and permit of their reading that which lies within. All this is the necessary prelude to understanding. Yet, for the understanding to be perfect and complete, something more is required: the word, gesture, and glance must awaken within us an echo. They must find there something which responds to them, for one comprehends only that which one has once found, or recognized, within oneself (and the only beings known to us from within are our own selves), or again, and very definitely, that which in another mind is attuned with our own.

Let us read once more, in the final pages of *Phaedrus*, the myth of the god Thoth, the inventor of the written word, and read what Plato has said

concerning that ghost or semblance of science which is a true description of a book, to which we believe we have consigned an art, from which we hope to extract it again, although the book remains mute and does not impart its secrets to the mind unless it has been trained by a lively and animated discourse. For the best writings serve only to unfold in the mind through sympathy the buds which it finds contained within, destined to blossom out into wisdom and beauty of the spirit. Moreover, in saying this Plato has but formulated the theory received from his master Socrates, the principle which made the power and virtue of his teaching and created a moving impulse lasting to our own times. This principle was friendship. For, as Xenophon tells us, Socrates never promised his pupils success or profit. But he was sure, all his life long, to make of those who listened to his theories friends who loved him and loved each other, εἰς τὸν πάντα βίον ἑαυτῷ τε καὶ ἀλλήλοις φίλους ἀγαθοὺς ἔσεσθαι.* Such, too, after the lapse of twenty-five centuries, was the teaching of César Franck, in which everything, as Vincent d'Indy writes, "proceeded from a feeling more powerful than all rules: love. . . . Such an atmosphere of love irradiated from that noble personality that his pupils not only loved him like a father, but loved each other in him and through him."†

True understanding is inseparable from friendship. It is *sympathy*, says Bergson, and the word has a wide range. This is the reason that, when face to face with him I evoke all that I owe him

* *Memorabilia*, I, 2.

† Vincent d'Indy, *César Franck* (Paris, 1906), pp. 215-16.

from that already remote period when he instilled into my mind the germs of truth, the master is pleased to remind me that he is, more even than my master, my *friend*, and that I should never have understood his teaching so well if there had not existed between us that profound affinity—that sort of preëstablished harmony—which is the precious essence of friendship, and perhaps the very secret of true understanding, of understanding ordained to truth.

For it is the truth that I seek and that I love in Bergson, even more than Bergson himself. It was the truth that he taught us to look for and to love behind his teaching, as he had sought and loved it himself. "Dialectic," he writes, "is what insures the agreement of our thought with itself. But by means of dialectic—which is only a relaxation of intuition—many different agreements are possible, while there is only one truth."⁴ The constant search for the one truth, the loyal endeavor, never achieved, to reach the light—these are undoubtedly the greatest lessons to be learned from his life and his work. We are being loyal to his spirit, even if not always to the letter of his doctrine, if we place above it, when the occasion demands it, the splendor of the truth or of what we firmly believe to be the truth. Ἀμφοῖν γὰρ ὄντοι φιλοῖν, ὅσιν προτιμᾶν τὴν ἀληθείαν.⁵

We must resolve, too, to place truth before that which is new. *Non nova, sed vera*. This should

⁴ *Creative Evolution*, p. 238.

⁵ These words of Aristotle's in the *Nicomachean Ethics*, I, 4, 1096/a-16, are those which have been rendered by the saying: *Amicus Plato, magis amica veritas*.

be the motto of every philosopher who is worthy of the name. This might be my motto. What I have endeavored to attain in these pages, and what you have a right to expect from them, is not novelty so much as truth, or the way that leads to truth. In this very quality lies whatever of originality there may be found therein—I mean, in the indifference to that which is commonly called originality, but which very often is nothing but paradox and contempt for the truth. Not that we ought to condemn the search for novelty or originality as such; it is often the only way an author may have of attracting the attention of his age to his own ideas. Take from Descartes his *tourbillons* (vortices),^{*} his theory of the automatism of the brute creation, and all that in him is opposed to the received methods and doctrines of his day; or strip Spinoza's *Ethics* of its mathematical setting, and at the same time you take from these writers a great part of that in them which struck the imagination of their time by its very singularity, and succeeded in getting the rest accepted, or at any rate noticed. Through these characteristics possibly, too, you may more readily arrive at that vital, solid, eternal basis of their thought which has been incorporated in human tradition. In the same way,

that which in Bergson first aroused and retained the attention of his contemporaries, and led to the immense success of his teaching, was a certain unexpected manner of presenting problems, of broaching and of solving them; it was his gift of imagery, and all those magic words, such as *intuition*, *durée*, *continuité*, *flux mouvant de la conscience*, *élan vital*, which people have used and abused, often without really understanding them. It is upon this field that battles have been fought; for this some have felt an infatuation while others have violently attacked it. But we are allowed to hope that in these disputes, for the most part verbal, friends and foes have been fighting shadows. The spirit of truth which informs Bergsonism and constitutes its real worth, and which will secure its permanence, is something at once more simple, much more simple, but also difficult to grasp. It is something which cannot be confined within a formula or a word; something which surpasses all the formulas and all the words that the philosopher has ever used to express his thought. For he, at least, dominates them, whilst his imitators are subservient to them. That which has done most harm to a right understanding of Bergson is Bergsonism, or the "intuitionism" of certain extravagant disciples or adversaries; just as "Debussyism" has most prejudiced the understanding of Debussy, and even injured Debussy himself, when by chance he has gone so far as to imitate himself.

Let us note, moreover, that what the world calls originality and admires under that name is generally excess. Truth, said Pascal, is compounded of the union of two contraries: the infinitely great and

the infinitely little, nobleness and baseness, right and might, law and liberty, reason and sentiment, continuity and discontinuity, transcendence and immanence. . . . But he who preserves the mean, affirming the two contraries, and holds firmly, as Bossuet says, to both ends of the chain, does not pass for original. It is he who does away with either of the two that delights the human intelligence, because human intelligence spontaneously propounds problems in terms of *all or nothing*. It treats the "contraries" as if they were "contradictories" excluding the mean, and goes from one extreme to the other. The original man, then, in the eyes of his fellows, is he who in the age of out-and-out intellectualism affirms an out-and-out anti-intellectualism, and *vice versa*. He certainly does well to weigh with all his might upon the empty side of the scale, so that he may restore the balance; but let him not weigh too hard or too long, lest his pressure end by upsetting the scale in the other direction, and leading men's minds into the opposite excess, so true is it that extremes meet. "Deepest black means white most imminent."

Bergsonism, either for purposes of praise or blame, has been qualified as anti-intellectualism, pure intuitionism, radical indeterminism, idealism, and who knows what besides; and certainly there is something of all these in his doctrine. But there is a good deal else, and if in order to express his original and fundamental view of things, Bergson was led by current ideas, and his milieu and his times, to take the part of intuition, liberty, and duration, against conceptual intelligence, determinism, and mechanism, he has none the less not denied

the theses he opposed. He merely denied that which is exaggeration in them and if we lose sight of this we distort his doctrine. To the determinist who declared "Man is nothing but a machine," Bergson opposed an unqualified denial. But it was the negation, the "nothing but," that he denied; he did not deny the affirmation that there is something of the machine in man. To the intellectualist who would maintain that "man is but an intelligence," he proved that man is not a mere intelligence. He showed that there is within him a possibly yet more profound force, because it is more in agreement with reality and with life, namely, intuition. Are we to reproach him with not having held the scales sufficiently straight? He had no need to do it, for one of the two theses—mechanism, intellectualism—was universally admitted, whilst the other—that which recognized liberty, intuition—was universally misunderstood. For us who replace his doctrine where it belongs, and interpret it with respect to the theses it opposed, the paradox and the shock of it cease to exist, and we rise without difficulty to the higher level which is in every doctrine the hallmark of truth.

Do not let us be afraid, either, that in acting in this way the originality of the doctrine or its interpretation will be lessened. True originality is nothing else than the original savor of the true; it is *naïveté*, it is genuineness. That which seeks to dazzle the eyes of men assumes a mask which time will soon snatch off. He who seeks the truth, and loves it alone, will find originality to boot, because truth, like justice, is eternally young and adorned with a simple beauty that is imperishable. All the

rest wears out; in it alone, to follow Bergson's profound thought, there is a force which does not decay. It alone deserves the attention of the philosopher and his devotion—when the philosopher aspires to be a sage.

One last word.

The seven chapters forming this book were written week by week for the public course of lectures I gave at the University of Grenoble from the middle of January till the beginning of March, 1926. A résumé of the lectures, as delivered, appeared in the *Revue des cours et conférences* from March to July of that year, and this translation of the book was then in preparation.

May I be allowed here to thank all who have aided me in the completion of this work by their sympathy, advice, and criticism, firstly and above all the master and friend without whom, from more than one point of view, this book would never have come into being. He has perused its chapters as they were written, but he kindly and generously elected not to discuss them with me until all were finished. "What will interest the reader most," he wrote on January 20, 1926, "will be the reflection of my views upon your mind. It is essential, therefore, that nothing should intervene to influence you, and that no suggestion of mine should prevent you from being absolutely yourself."

I have also to thank the members of the ever-increasing Grenoble audience that twice obliged me to move to a larger lecture room. I should like them to realize all that I owe them for the sustained and discriminating attention which helped me so much in my work, for without it I should not have

succeeded. This silent and impressive testimony showed how vast and far-reaching an influence the great metaphysical problems exert upon men's hearts and minds, an influence possibly greater than ever to-day. It demonstrated the depth and vitality of spiritual claims in face of the increasing materialism of the day. Finally, disdaining pseudo-science, it pointed out the way to be resolutely followed by all who desire to restore to our civilization its true soul, and bring it once more face to face with *reality*.

It was this genuine reality that my audience, like myself, so much appreciated in Bergson. We may not be able to participate in all the philosopher's ideas. We may find it impossible to accept all the conclusions to which they have led him. He himself would be the last to feel astonished at this, or to reproach us for it, for the sense of the inevitability of human shortcomings is the moral counterpart and the virtue of all true realism. But it would be difficult to deny, and I do not think that any of my hearers would deny, that he has stated the problem as it ought to be stated. Not one of them proved insensible to the dramatic interest and the compelling power of his story. It is the story of a mind engaged in the quest for truth, of a way of thinking fashioned by reality, and of a soul that loved truth above all else in the world, and desired only to serve her and make her known and loved. Such an example, we must all admit, deserves at the very least our indulgence and our respect, even if it does not go further and compel our acceptance and our affection.

JACQUES CHEVALIER.

CONTENTS

	PAGE
TRANSLATOR'S NOTE	v
INTRODUCTION	vii
 CHAPTER	
I. THE MILIEU AND THE PERIOD—THE ANTHRO- POCENTRIC AND THE THEOCENTRIC CUR- RENTS IN THE FRENCH PHILOSOPHY OF THE NINETEENTH CENTURY	1
II. THE MAN AND THE WORK	37
III. THE METHOD. INTUITION AND THE PHILO- SOPHICAL MIND	74
IV. THE IMMEDIATE DATA OF CONSCIOUSNESS. FREE WILL AND PURE DURATION	114
V. MATTER AND MEMORY. THE SPIRITUALITY OF THE SOUL ESTABLISHED BY POSITIVE METAPHYSICS	157
VI. EVOLUTION AND CREATION. THE SIGNIFI- CANCE OF LIFE. MAN'S PLACE IN THE UNIVERSE	207
VII. THE TREND OF BERGSONIAN THOUGHT. GOD AND MAN'S DESTINY. THE METAPHYSICAL REVIVAL	262

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CHAPTER I

THE MILIEU AND THE PERIOD—THE ANTHROPOCENTRIC AND THE THEÓCENTRIC CURRENTS IN THE FRENCH PHILOSOPHY OF THE NINETEENTH CENTURY

THE intellectual realm knows no more of spontaneous creation than does the physical realm. There is no doctrine which could accurately be described as *proles sine matre creata*. However original it may be, a doctrine is none the less the product of tradition, either oral or written. It may have perpetuated this tradition to such an extent that it seems to be merely its extension, or it may be so detached as to be free of it, but at any rate it is its issue. Every one of us speaks the language of his times. The truly great pronounce it in their own way, but they still speak it, and those who slander their period yet borrow their arguments and their style from it. It would accordingly prohibit our understanding of the meaning and the scope of a work if we were to separate it from the milieu in which it was created and the men for whom it was written. Their loves and their hates, their prepossessions and prejudices, their habits of thought

and action, their method of approaching a problem and, if we may say so, the natural trend of their minds, their spontaneous attitude with regard to men and matters and with regard to truth itself, must be taken into consideration. That which constitutes the value of a work is not merely its value in itself; it is also, and first of all, its value for its age. Every profound and enduring doctrine is, in the last resort, a human being's expression of himself. And this human being, before taking his place in the world of mind, belongs to the material world; he also belongs to his own age, before he belongs to all the ages. A Bergson has to submit to this law just as a Descartes or a Plato has done. And for this reason, before studying his doctrine, we must study the man; and before studying the man, we must study his epoch.

Let us try to imagine the state of thinking men in France at the end of the war of 1870-1. It is both an advantage and a danger for France that it is placed at the intersecting point of the great lines of communication binding north to south and east to west, and thus open to the most diverse influences. The advantage may lie in assimilating and securing general diffusion for them. The danger is that if it be not sufficiently strong to react against them and oppose its own individuality to alien ideas, it may be submerged by them. Now though the nation in 1871 manifested astounding energy in binding up its wounds and arising from its recent overthrow, it seemed as if the French mind had lost confidence in itself and—more serious still—in the value of the methods it had followed and the ideas it had defended. "What a decline and fall, what

wretchedness and abomination! Can one believe in progress and in civilization in face of all that is going on?" These words of Flaubert's did not express merely his own sentiment; they expressed the sentiment of such men as Taine, Renan, Sully Prudhomme, and Leconte de Lisle. But, strangely enough, those whom stern reality had awakened from their dream, and those who desired henceforth to reserve their love for France instead of squandering it on the universe, even they with their passionate love for her brought to France a troubled mind and an uncertain habit of thought. There was a general belief that Germany had conquered us in 1870-1 more through her professors than through her soldiers, and we went to school to her to learn the secret of her victory, as if the triumph of force had been a conquest of the mind. *Then* it was that the foreigner ruled us.

First it was the English. Mill's empiricism, aided by Spencer's evolutionism, had accustomed men's minds to view man as nothing but an automaton. It had undertaken to reduce his thought, feeling, will, and whole spiritual existence to a mechanical play of ideas, or rather, of sensitive images governed by the laws of association, as atoms of matter are governed by the law of gravitation. Henceforth liberty could be nothing but an illusion, due to ignorance of natural determinism. Rational principles, the loftiest ideas and beliefs of humanity—such as the idea of cause, or the idea of God, for instance—were no more than habits which had been transmitted and reinforced by heredity, the mere expression of physiological and social coercions. Such were the conclusions to which this new science of nature

and of the human mind tended. Spencer has himself confessed it in his *Autobiography*. He says: "My . . . tendency to disbelieve alleged miracles had much to do with my gradual relinquishment of the current creed and its associated story of creation. . . . The doctrine of the universality of natural causation has for its inevitable corollary the doctrine that the Universe and all things in it have reached their present forms through successive stages."¹ What is man, in a world thus conceived? A mere fragment of natural determinism.

English thinkers, it is true, did not infer from their original scheme all the consequences implied in it, and so their statements with respect to humanity were somewhat differentiated. They recognized that the science of human nature, unlike the science of the heavenly bodies, cannot establish absolute laws or make infallible predictions, because it does not know all the causes or circumstances which may govern the conduct of individuals. John Stuart Mill does not admit himself a fatalist. He does not consider the relation of cause to effect a necessary and an absolute relation, or suppress human liberty and responsibility. Indeed, upon the final questions regarding God and the immortality of the soul, he maintains that the traditional beliefs concerning them do not lose anything by his theory. On his side, Spencer forcibly asserts that the end of our research brings us face to face with the "unknowable," and reveals to us, in showing us our own limits, the absolute incomprehensibility of the most simple fact considered *in itself*, and the impen-

¹ *Autobiography for 1857-58* (1904), Vol. II, p. 6.

eternal mystery which dwells at the root of all things.

But neither Mill's empiricism nor Spencer's evolutionism could give a basis of reality to such assertions. Mill did not succeed in explaining how the liberty, unity, and identity of the personality any more than the validity of reason could be safeguarded in the phenomenist theory. If evolutionism—Spencer had propounded the theory before Darwin had tested it by facts—afforded the doctrine a certain systematic, though somewhat arbitrary and artificial unity, it did not provide it with a metaphysical foundation. Spencer aimed at "reconstructing evolution with fragments of the evolved," like a "child who is working with the pieces of a puzzle-picture and putting together unformed fragments of the picture." He did not retrace the path of the movement to its genesis, or the course of its progress.¹ Still less did he reproduce its very essence, and he left us to face a rigid determinism in which life and thought were engulfed.

This positivistic empiricism, therefore, lacked the support of metaphysics. This the Germans supplied, so true is it that man, a metaphysical creature, cannot do without metaphysics. It was indeed a case of giving the explanation after the description, and as the description was above all destructive, it was necessary to reconstruct one from the ruins. The world in all its divisions, from matter to life and spirit—and even in its development by the unvarying course of natural processes—was shown to be given over to the rigid determinism of laws. But then the question presented itself: What were

¹ *Creative Evolution*, pp. 364-65.

these laws, and whence did they issue? According to the phenomenist theory, they could not be conceived as the work of a sovereign will—God—in whom liberty and absolute independence commingle. For if these laws were but decrees of His omnipotent will (even supposing that will to be immutable, as Descartes regarded it), we should not be dealing with an inexorable determinism like that which this theory asserts to be at work in the cosmos, a determinism exactly like the *Fatum* of the Latins and the *Ananké* of the Greeks. What, then, are these laws, and this universe, if they be not the work of God?

It is here that the metaphysics which originated with Kant, but was carried to a point far beyond his position, makes reply: *In its matter, as well as in its form, the world of experience is the work of the human mind.* Grant the mind, and the universe is necessarily granted in the same breath. The logical activity of the mind is duplicated in a creative activity which, at bottom, coincides with it. But whose mind? The mind of man. Intellectual intuition, which Kant regarded as the prerogative of the Supreme Being, refusing possession of it to human understanding because, in his judgment, it implies an inherent power of creating its object, was boldly attributed first by Fichte, and then by Schelling, to man. Thus they conferred upon our knowledge the power of infinite productivity. It is the Absolute Ego that constitutes the universe, according to Fichte; and Impersonal Reason, according to Schelling; whilst if we follow Hegel, it is Ideas in development, starting from the "nothingness" identical with being. To Schopenhauer it

is Will, and to Hartmann, the Unconscious, that constitutes the universe. But all these are still human, all these come from man, so that after all *we* are creating the world of experience as we create the mathematical world, and the objectivity of the universe appears on all points similar to the objectivity of mathematics, *artificial* as it is and, like it, *necessary*. In short, the determinism which rules the universe is the product of our intelligence, understood to mean not a reasonable and free power, submissive to reality and to its Author, but a kind of inner necessity, at the same time the sovereign and the slave of the laws it decrees. "To philosophize about nature means to create nature," asserts Schelling.

This "idealism," in its author's scheme of thought, possibly did not imply any pretension to substitute man for God, and to construct, or to reconstruct His work. The deduction or creation of the world by the mind was, it may be, only an effort to justify *a priori* the content of its cognition, i.e. reality. But this "absolute idealism" was undoubtedly linked with pantheism; like the doctrine of Spinoza from which it was derived, and which it pushed to its utmost extreme, it made the existence of the universe a necessary corollary of the existence of the mind. It thus denied all contingency, because it denied the great primary contingent fact, that is, creation. Moreover, it tended to make of human intelligence the absolute measure of the intelligible, by identifying it with the Mind which thinks and necessarily produces the world. Whether Schelling intended it or not, he thus put man in the place of God.

It is not surprising, therefore, that German idealism should have appeared to be and was interpreted as being a deification of man, before it came to serve as the justification for brute fact,* or for force considered as rational and as divine. Heinrich Heine confessed it; many whose pride was secretly flattered believed Hegel offhand when they heard him assert that man was God. It was upon their faith in Hegel that Saint-Simon's followers proclaimed him God, or, like *Enfantin*, themselves posed as God. And it was a final echo of this Hegelian doctrine that was heard in the words uttered by Jules Guesde in the Chamber of Deputies, June 24, 1896: "Man, is in a fair way to becoming God."

This mixture of determinism and pantheistic idealism finally ended in a *monism*, which pretends to be, as Haeckel says, "a link between religion and science." In reality it absorbs religion in science, effects the "reconciliation of the opposites" in the immanence of the eternal becoming, denies all contingency, all liberty, and engulfs personality, both human and divine, within the womb of the inflexible necessity of Nature, conceived as "the true God."

It was this monism which inspired Taine and Renan, the two thinkers who exercised the greatest influence upon the generation living between the wars of 1870 and of 1914. With Darwin—who soon became very popular—they provided the stock of general ideas with which it sustained its existence. Thence are derived well-known and oft-repeated formulas, such as: Perception is only "true" hallucination; reality is but coherent illusion. A fact is

* *Vide La signification de la guerre* (Paris, Bloud), and the speech made by Bergson, as president, at the public meeting of the *Académie des sciences morales et politiques*, Dec. 12, 1914.

"a fragment arbitrarily severed from the infinite and continuous woof of existence," law alone exists, and everything is subjugated to it. Mind is "a polypus of mutually dependent sensations and images." Virtue and vice are products, just as sugar and vitriol are. Man is not in Nature as a realm within a realm, but as a part within a whole. Genius is a result of race, milieu, and of epoch, and the same holds good of even the most rudimentary moral state. Nature and history are but the enfold-ing of universal necessity: the world forms one single and indivisible being, of which all beings are members.* God is the category of the ideal. Does this God exist, or not? The question of existence is too much for us. Nothing exists, everything in humanity and in Nature is creating itself, and there is no room for creation in a series of effects and causes. To *organize* humanity in a *scientific* manner and, after having organized humanity, to *organ-ize God* . . . such should be our task. . . ." One single belief survives this débâcle: the belief in science, or rather, as Renan says, in "the religion of science," faith in its future, faith in the unlimited progress of the human mind which history records, the final success of which will be "the perfect advent of God," "the end of universal progress being a state . . . in which all existing matter will engen-der a unique resultant force, which will be God." But this belief which Renan extolled ends by destroying itself. When man has lost faith in the truth, he has lost all faith, he abides in the graceful negation which we call dilettantism, but which calls

* Taine.

* Renan, "*L'avenir de la science*," *Pensées de 1848* (reëdited by him in 1890).

itself tolerance and liberalism. It is tolerant of *all* truths—or all errors, for it is all one—^{*} but not of *the* truth; it is a liberalism welcoming all the doctrines conceived by the human mind, with the exception of that which asserts that the truth exists, that it is one, and excludes error, and that man should humbly submit to it, because such is, as Pascal says, “the right use of reason.” The formula of this doctrine, like its metaphysical principle, is *the deification of nothingness*. An everlasting *fieri*, an unending metamorphosis, says Renan, is what modern intellectual *idealism* has substituted for the God of *spiritualism*,[†] the God of the Jews and of the Christians. But what does that amount to? Let us listen to the final clauses of the Prayer upon the Acropolis:

An immense wave of oblivion is sweeping us along to a nameless gulf. O abyss! thou art the sole God. . . . All here below is nought but symbol and dream. The gods pass like the human beings, and it were not well that they should be eternal. Man’s past faith should never be a fetter. He has done his duty by it when he has carefully enwrapped about it the folds of the purple pall in which the dead gods repose.[‡]

^{*} Aristotle has demonstrated to the skeptic that to affirm “all is true” really amounts to affirming that “nothing is true,” or, rather, that “all things are both true and false,” which really is denying the truth (*Meta.* IV, 5. Cf. the author’s *Notion du nécessaire chez Aristotle* (Paris, Alcan, 1915), pp. 39, 40 and note 2).

[†] See Translator’s Note.

[‡] Renan, *Souvenirs d’enfance et de jeunesse* (1883). Though an extremely clever man, Renan had nothing of the philosopher in him. It was the error of two whole generations to expect metaphysics from him.

Nevertheless, beneath these ostensible doctrines, and at a greater depth, less perceptible, but more productive, other ideas, both new and old, bearing within them precious seeds of truth, might have been discovered.

Under the name of science, certain thinkers substituted, as Bergson says, "for a set of truths either experienced or demonstrated, a certain new scholasticism that has grown up during the latter half of the nineteenth century around the physics of Galileo, as the older scholasticism grew up around Aristotle." Some true savants, however, in the front rank of whom we must reckon Claude Bernard (as we see in his *Introduction à la médecine expérimentale*), had shown that the determinism upon which science rests is not a fact, but a principle of order and reason which shapes the experimental idea or hypothesis, and that it might be stated as follows: to the scientific man, everything occurs as if, certain conditions being fulfilled, certain phenomena must necessarily be produced. We are, therefore, dealing in this case with a hypothetic necessity, dependent upon an *if*, and not with an absolute necessity, like that which the pseudoscience unwarrantably extends from the mathematical domain to the whole universe. This *if*, in the case of the living organism, is the directive idea, the *creative source* whence it proceeds, which determines its essence. Hereby is established the important consideration that science, born of the collaboration of idea and fact, is "always provisional and always, in part, symbolic. . . . Inherent in Claude Bernard's work is thus the affirmation

* *Creative Evolution*, p. 370.

of a deviation between human logic and the logic of Nature.¹⁰

On the other hand, the very founder of positivism, Auguste Comte, after having dreamed of reducing everything to mathematics, realized that experience was opposed to his theory, and that in passing, especially from the inorganic order to the *order of life*, either organic or social,¹¹ such a "vast accretion" was produced that it became impossible to merge the higher in the lower. In his *Politique positive* he had even tried to complete the hierarchy of the sciences by superposing on sociology an ethics conceived as the 'abstract and systematic study of man himself, from the standpoint of his indivisible existence and his personal unity. This was to be a study of the individual man, whom he had at first believed to be entirely explained in terms of biology, but henceforth places above and beyond the collective order. It was a grand and simple conception, in which the world of knowledge no longer appeared as a single science, but as a multiplicity of distinct and graded sciences. The diversity and hierarchy of these distinct and graded sciences would correspond with similar divers existing orders of reality. But it was an incomplete and, to some extent, ambiguous conception, because it lacked a metaphysical basis. In crowning the positive system with a metaphysical one, or rather, with a religion,

¹⁰ Bergson, *La philosophie* (Paris, Larousse, 1915), p. 12.

¹¹ This discovery of life was of vast importance if it be true to say with Paul Bourget (*Réponse au discours de réception de Boutroux*, at the Académie française, Jan. 23, 1914) that "the thought of to-day is polarized in all the ideas represented by the word Life—as the thought of 1850 was polarized in all the ideas represented by the word Science."

after he had denied the legitimacy of any form of metaphysics or religion, Comte was scarcely doing more than projecting the relative into the absolute without even recognizing its relativity. John Stuart Mill considered it one of Comte's mistakes never to leave a question open.¹¹ After Comte had pushed back the limits of the relative, he tended to restore them, as negations; in spite of all his efforts to assure individuality its place, he never could see in it anything but a combination of the biological and the sociological. . . .

That positivism, however, could be reconciled with metaphysics, and even with metaphysics careful about reality and respecting personality, had been demonstrated to a certain extent by Renouvier. Starting from the criticism of Kant and the phenomenonism of Hume, he had endeavored to reintegrate the ideas of cause, aim, liberty, and personality with the world of phenomena, or with our representation of it. That position had been created by Cournot, a thinker of great breadth of vision, who had instituted "a criticism of a new kind" relating both to "the form and matter of our cognition." He had been able to discern, behind the *logical* order we insert into phenomena, a more profound order, not dependent upon verbal categories, but upon realities. It is a *rational* order, or, better still, a *trans-rational* order, which extends the boundaries of our reason without contradicting it, of which, in the end, God alone possesses the secret.

From that time forth one might dream of establishing friendly relations between the metaphysical

¹¹ "He cannot bear that anything should be left unregulated" (*Auguste Comte and Positivism*, 1865, p. 196).

sense and the search for the positive, which would enrich and clarify philosophic tradition with the contributions of science whilst denoting clearly the limits of their respective spheres. But positivism, carried away by the inner logic of the movement that had given it birth, excludes the metaphysical, and entrenches itself in *the human order*. Then, like the idealism of the Germans, it *deifies* it.

Bergson clearly perceived these two points. Taine implicitly comes back to metaphysics, but he confines the horizon of this metaphysics to man and human affairs. He does not resemble Comte or ally himself with him any more than does Renan. Yet it is not entirely without reason that he, like Renan himself, is sometimes classed with the positivists. There are indeed a good many ways of defining positivism, but we believe that one must regard it above all as an anthropocentric conception of the universe.¹³ It is an anthropocentrism, moreover, from which the "individual" as a term of classification is finally eliminated, since its God, Humanity, or the Supreme Being, is an impersonal being who does not admit anything in the way of an individual existence "save its incorporable portion, setting aside all individual deviation. Our immortality, since it is acquired by incorporation with the Supreme Being, therefore, can only be an impersonal immortality. He who does away with personality in God necessarily does away with it in man, for the one guarantees the other.

This anthropocentric and impersonal positivism finally ended indeed in that "Religion of Humanity" which did no more than express, in mystic form, the

¹³ *La philosophie*, p. 14.

thought underlying the whole of Comte's system and the whole of positivism in general. It was indeed that "sociology" and that "socialism" which were easily enough confused, at least in the beginning, by men anxious to build as well as to plan, who aimed at nothing less than reinstating in men's minds a kind of new religion. It was to be a retrogressive dogmatism founded upon the cult of humanity and of all that is derived from humanity, and upon the claim that it could do without God. This is why Bergson, after noting the essentially human and anthropocentric nature of positivism, was not incorrect in adding that "the founder of positivism, who declared himself a foe to all metaphysics, had the soul of a metaphysician, and posterity will see in his work a powerful effort to *deify* humanity."¹⁴

Now whilst one section of French philosophy tended resolutely toward the study of the physiological, psychological, and social aspects of man, and to a certain degree consciously made of man, more or less deified, the matter of reality, another current of thought—not less strong, though perhaps less apparent—gave first place in men's minds again to the consideration of nature in general and of mind in general. The representatives of this second tendency, which we might call *theocentric*, restored the claims of metaphysics, which the others had relegated to the past, or made into a matter of sentiment, subjective and frail. In contrast with the impersonal anthropocentrism favored by the former, they restored personality both to man and to God.

¹⁴ *Ibid.*, p. 13.

These two lines of thought confronted each other in France during the course of the nineteenth century. To sum them up exactly and forcibly we cannot do better than refer to the words of Plato in the fourth book of the *Laws*. There the philosopher, in search of the best form of government, is asking himself who is to determine its standard. It is God, he says. There is no upright and true constitution save that in which the rulers are the servants of the law, i.e. of God, of "that God who is, according to old tradition, the principle, end and means of all reality." Protagoras declared, "Man is the measure of all things." But assuredly it is God, first, of all and far more than man, who must be for us the measure of all things. .

The trend of thought we have studied so far is derived from Protagoras; it makes man, his nature, his concepts, the measure of all things. The one which we are now going to examine is derived from Plato; it makes God, and the divine ideas and power, the measure of reality.

"In the very beginning of the century," writes Bergson, "France had a great metaphysician, the greatest she has produced since Descartes and Malebranche—Maine de Biran. His doctrine, though little noticed at the moment it appeared, exercised increasing influence; we may even ask if the path first opened up by this philosopher is not the one which metaphysics must ultimately follow. Contrary to Kant (for those who have called him the "French Kant" are in error), Maine de Biran considered the human mind capable, in one respect at least, of reaching the absolute and making it the object of its speculative thought. He has shown

that the knowledge we have of ourselves, especially in the feeling of effort, is a privileged knowledge which exceeds the bounds of pure "phenomenon" and attains reality "in itself," that reality which Kant declared to be inaccessible to our thought. In short, he conceived of a metaphysics that would rise ever higher and higher, toward mind in general, in proportion as consciousness descended deeper into the depths of the inner life."¹⁵ The concentration of the mind upon the inner life of the soul, and, if one may put it thus, "the idea of penetrating through experience into the beyond, or at least reaching its threshold by taking inner observation as a guide,"¹⁶ such is, in effect, the governing idea of the Biranian doctrine. That is its element of originality. At first a disciple of the ideologists of the eighteenth century, he perceived fairly soon that "these metaphysicians always take for granted the judgment which asserts personality," when "it was necessary above all to put a foundation under it." He discerned this required foundation through his discovery of the *fact* behind the *phenomenon*—"the primitive fact of the inner sense" which yields us, in view of our feeling of effort in any piece of exertion, the principle of causality, "the father of metaphysics"—and compared them the one with the other, as the exterior with the interior. "The distinction between the *inner* and the *outer* man is of capital importance," he writes in his *Journal*, under the date October 28, 1819; "it will be the basis of all my later research."

¹⁵ *Ibid.*, pp. 15-16.

¹⁶ Bergson, *Compte rendu de l'Académie des sciences morales et politiques*, 1906, Vol. I, p. 156.

It was to lead him to the Absolute. For, having insinuated himself into the heart of human personality, and finding it located halfway between the relative and the absolute, he was able very clearly to perceive both the limits and the point of contact of the relative and the absolute. At the same time he was prepared to grasp, as Ravaisson said, that "in the cause we are ourselves, there exists that absolute by which all the relative is eventually measured." This flash of insight carried him beyond and corrected beforehand, if one may say so, the positivism of Comte, in its twofold claim to adhere to the relative only, and find in it the absolute. The same inherent logic, which was later to urge Comte to deify man after his exclusion of God, led Maine de Biran to retrieve God after he had put man in his rightful place. From that which is within man he climbed to that which is above him; in sounding the depths of man he discovered God. The notions of which he had found the connecting link in the ego seemed to him like *forms* for which the ego serves as *matter*, as it were, but which also go far beyond it and bring us into connection with the absolute, that is, with God. Ethical considerations inclined him in the same direction: from a sensualism bordering upon that of Epicurus he had passed on to a Stoic doctrine of the tension of will-power; then he had discovered his own weakness and powerlessness—the powerlessness of the will limited to its own resources—and he went on to draw from a deeper source the power to act aright. "Thus by means of many different, though converging, trains of thought Maine de Biran was led, if not to transform his philosophy,

at any rate to fix its center elsewhere, and this center was no longer the ego, but God."¹⁷ Man is an intermediate between God and Nature. To the human life the life of the spirit must be added, as to the animal life the human life is added; and this life of the spirit is a higher life—a life of sacrifice and love, a life of union with God—in which the will, far from being absorbed and exterminated, acquires its full liberty and finds itself in losing itself.

"I have often been greatly puzzled," writes Maine de Biran, December 20, 1823, "to conceive how it is that the Spirit of Truth can be in us without being ourselves, or without losing its identity in blending with our own spirit, our ego. Now I understand this matter of intimate intercourse with a spirit superior to our own, which speaks to us, which we hear within ourselves, which animates and impregnates our spirit without being merged in it. For we sense the fact that our good thoughts and impulses do not proceed from ourselves. This intimate communion of the Spirit with our own spirit, when we are able to summon it and prepare it a dwelling-place within, is an actual psychological fact and not an act of faith alone." But it is a fact which denotes that our ordinary selves have been surpassed, for this Being, the Universal Being, as Pascal says, is in us without being ourselves.

Here Biran comes into line with Pascal, in the latter's most profound intuition. And this significant agreement with Pascal is shown more clearly yet, as Bergson has pointed out, in the thinkers who have adopted the same impulsion and extended

¹⁷ *Ibid.*, p. 160.

it in different directions—Ravaisson, Lachelier, and Boutroux.

In analyzing the phenomenon which introduces mechanical process, that is, habit, into the life of the spirit, Ravaisson had shown, as early as 1833, that mechanism in the instances where we know its origin is not cause, but effect; that it is not the blind generator of an artificial semblance of spirit and an illusive form of liberty, but the inert residuum of the free activity of the spirit, and of a spirit which is its own master, for habit is set up by will, and remains submissive to will. As Bergson says in his notice on Ravaisson,¹⁸ "our inner experience shows us, in habit, an activity which has passed by insensible degrees from consciousness to unconsciousness, and from free will to automatism. Is it not under this form, then, like a consciousness become obscured and a will become inactive, that we ought to depict nature? Habit thus affords us a living proof that mechanism furnishes no explanation of itself that is self-sufficient; on this other view it would be but the fossilized residuum of a spiritual activity, so to speak." Ravaisson, probing into the nature of spirit, as Aristotle does, shows us, that instead of proceeding from abstraction to abstraction, and from generality to generality, as far as absolute "nothingness," which the intelligence usually does, there would be, as Bergson says, quite another course open to us. This would be to extend the vision of the eye by a mental vision. Without quitting the realm of intuition, that is, of things that are real and individual and concrete, it would

¹⁸ *Compte rendu*, etc., 1904, Vol. I, p. 686.

mean, the seeking of an intellectual intuition beneath the sensuous intuition. It would mean piercing, by a mighty effort of mental vision, the material envelope which surrounds things, and going forward to read the formula, invisible to the eye, which their materiality can unfold and display. Then the unity which binds entities to one another would be manifested, the unity of a train of thought which, from crude matter to plant life, from plant to animal life, from animal to human life, we find ever gathering itself together, enfolding itself in its own substance until at last, by one concentration after another, we come to the divine thought which thinks all things in thinking itself.¹⁰

This fundamental view of the *Essai sur la métaphysique d'Aristote* (1837-1846), in which Ravaisson has so clearly defined spiritualism in contradistinction to materialism, is resumed and his position still more sharply outlined in his report upon *La Philosophie en France au XIX^e siècle* (1867). There he discriminates between two philosophical methods. The first makes use of *analysis* and proceeds to decompose by successive divisions and eliminations till it has reached the most abstract and bare elements, and finishes by resolving everything into absolute imperfection, in which there is neither form nor order.¹¹ Whether this task, moreover, be performed by the mechanist, who reduces everything to the most general and most elementary state of physical existence, or effected by the idealist, who reduces them to the most elementary logical states of the understanding, it tends in both cases, by different paths, to descend step by step to noth-

¹⁰ *Ibid.*, pp. 677-78.

ingness, that is, to the minimum of reality and intelligibility. *Mechanism and idealism are thus but two forms of materialism.* And our day, adds Ravaisson, has witnessed the reappearance, under the name of positivism, of a new materialism—a materialism which is the issue of the monstrous union of mechanism and of idealism. It bears its own contradiction and death in germ in its members. And it can only live and keep itself alive by the gradual elimination of this germ, and by recovering at the principle of life and organic nature itself something analogous to that soul in us which knows and owns itself. There is another philosophical method which declines to cling to an analytical study of the elements alone, but proceeds by the device of synthesis, to consider their form, and the manner of their assembling, their unity, and their category. It maintains that nothing proceeds from nothing, that nothing happens, and nothing exists, without a reason, i.e. without a governing principle and an aim. It does not pretend to explain the higher by the lower, life by death, being by nothingness; but rising from reason to reason, it ascends to the reason which is self-justified and all-sufficient unto itself, in a word, to the apex of the perfect personality which is wisdom and infinite love, as well as plenitude of spiritual liberty. It grasps in nature, as it were, a reflection, a dispersion or a *distension* of the mind, so that God serves for the understanding of the soul, and the soul, of nature. This doctrine is spiritualism. "We must," says Pascal, "have an idea at the back of our minds, and judge everything by it; in other respects, speak like ordinary people. The thought at the back of our

minds, which must not prevent our speaking, in each special science, the language peculiar to it, that proper to physical phenomena, is the metaphysical thought."

Such is the lofty and liberal doctrine which Ravaisson expounds in the conclusion of his *Report*. Such is the fundamental sophistry which, with singular perspicacity, he denounces in it; such the metaphysical revival he there predicts; and of this, he adds, that part which belongs to the country of Descartes and of Pascal will not be the least important. All the visible universe, according to Bergson, is presented there "as the outward aspect of a reality which, seen from within and grasped in itself, bears the appearance of a free gift to us, a great act of liberality and love. 'No analysis can give an idea of these admirable pages. Twenty generations of students have known them by heart.'"¹⁰ Upon French thought they have exercised an influence which, even though more or less diffused, has been none the less profound and far-reaching.

In his *Report*, Ravaisson, singularly alive to all that betokened the coming of this metaphysical revival, on three occasions mentioned the name of a young teacher recently entrusted with a share in the philosophical instruction in the Ecole Normale. This was Jules Lachelier, who, in his account of Caro's *Idée de Dieu* (1864), characterized reflective thought as that "which, beneath the concatenation of inner phenomena, recognizes the free activity of the spirit." In the same study, he contended that the purely human God of Vacherot was a God "reduced to the abstraction of being in general, that

¹⁰ *Ibid.*, p. 694.

is, to the most vacuous of all abstraction," and in a public lecture upon the proofs of the existence of God he declared that "nature is like a thought that does not think itself, dependent upon a thought that does."

Less of an artist but more of a logician than Ravaisson, possessed of incomparable vigor, profundity, and range of thought, Lachelier, by his teaching and his personal influence no less than by the slender volumes on which he has delivered to us the essence of his reflections, exercised a decisive effect upon the whole generation that succeeded him.²¹ "In his eyes," writes Boutroux of him, "one question dominated every other: *Is this true?*" Lachelier clearly differentiated between the abstract truths which may adequately be contained in formulas, and the principles of the intellectual and ethical life which exceed all the verbal interpretations that one may attempt to give them. This intellectual and ethical life we feel permeating his work everywhere, behind the apparent restraint and dryness of a train of thought which is fully master of itself. It gives his conception its peculiar worth, indeed its dramatic and its human worth.

Arriving at maturity at the time in which a Cousinian eclecticism which was neither stern nor sturdy was reigning in the schools, Lachelier attached himself to Kant, who, to his mind, presented a model of coherent thought, conducted in accordance with the laws of definite and assured

²¹ "Himself an incomparable master, his thought was the sustenance of several generations of masters," was written of him by Bergson (*La philosophie*, p. 17), who dedicated his thesis to Lachelier.

reasoning. While accepting the Kantian *method*, he was also influenced by its *doctrine*. Thence is derived that idealism which, in him, is closely bound up with spiritualism, and from which he attempted by prolonged effort to free himself, though he was never entirely successful. This inner conflict endows the history of his thought with all its significance and, if one may say so, gives it its vital interest.

Lachelier starts from Kant's principle: "It is essential that the *I think* should accompany all my representations; otherwise they would not exist for me." He endeavors, however, to go further than this principle will take him, in order to reach reality, and that is the object of his *Fondement de l'induction* (1871).

Against empiricism and abstract rationalism Lachelier maintains that the world necessarily possesses all the modalities that our thought demands for its exercise.

Now thought demands unity; all phenomena, therefore, are subject to the law of efficient causes, which connects them all in a necessary way and forms them into a continuous whole. This law indeed is the sole foundation we can cite to account for the unity of the universe.

But this principle does not suffice as an answer to all the demands of our thought. One of its desires is to apprehend itself, not only as possible, but as actual. And thus "abstract existence, whose peculiar quality is mechanical necessity, itself stands in need of finding a prop in concrete existence, which belongs to the category of ends alone." As a matter of fact, phenomena are only conditionally postulated by the law of efficient causes: A will

occur if B occur, and so on indefinitely. But for B and the other conditions upon which it depends to be necessarily produced, A must have been chosen to some extent as an aim, and nature must possess an "interest" or stake in its occurrence, so that the causes from which it seems to result mechanically are only means discreetly concerted to establish it. The judgment of causality is solely hypothetical; the judgment of finality is categorical. The judgment of causality grants the existence of a phenomenon conditionally, in relation to the antecedents, infinite in number, whose existence it assumes; the judgment of finality applies absolutely and without conditions to each of the ends of nature. To the unity of a *series*, which makes each movement arise out of a preceding one, it adds the unity of a *system*, which causes many movements to converge toward a common end. Suppress this end, and who shall henceforth guarantee any order in nature or the maintenance of any order? Finality is not merely one method, it is the only complete method of accounting for thought and nature. The true reasons for things are their ends or aims. "It is not universal necessity, therefore, but rather universal contingency that is the true definition of existence, the soul of nature, and the last word in regard to thought."

Nevertheless, finality is not self-sufficing. If it cannot be accounted for by mechanics, which is only its projection in space and time, whence comes it? and how is it superposed thereon? No explanation can be found for it save in an act of free will. And thus the law of final causes absolutely demands *liberty*, because it can obtain the ideas by means of

which it coördinates phenomena only from a liberty endowed with the power both of conceiving these ideas and of realizing them by means which will determine its action after it has itself determined them. "The most exalted of ideas is born of free will, and is itself but liberty."

Thus for *material idealism* is substituted a *spiritual realism*, "to which every being is a force, and every force a train of thought tending to more and more complete consciousness of itself." In subordinating mechanical action to finality, such a philosophy prepares us "to subordinate finality itself to a higher principle, and by an act of faith to surmount the limits of thought as well as those of nature." This act is the wager, and for us, as Pascal puts it, the stake is human life, and the gain, eternity. It demands the sacrifice of self, and its end and aim, upon which depends the whole finality of Nature (a thought that does not think itself) is God (a thought that does). "The highest problem in philosophy, and one which is possibly already more religious than philosophical, is the transition from the formal absolute to the real and living absolute, from the idea of God to God. If syllogizing fails to accomplish it, let faith run the risk; let the ontological argument give way to the wager."²²

Causality, finality, liberty—such are the three terms, or, as Pascal would say, the three orders, or, to put it yet another way, the three dimensions of being, in the realistic dialectic by which Lachelier developed his thoughts. To be, in the full sense of

²² Vide Lachelier, *Notes sur le pari de Pascal*, reprinted at the end of *Du fondement de l'induction* (Paris, Alcan, 6th ed.) Cf. the author's *Pascal*, Chap. VIII and Appendix IV.

the word, is to be superior to all nature, to be the truth and the light itself. The progress of thought stops there, and it is only there that it can stop. "The Deity I am thinking of," replied Lachelier to Durkheim on one occasion, "is not a Venus born and adored in the market-places."²³ It is the Supreme Perfection which metaphysics endeavors to overtake at its very source. Religion is an attempt to draw near to it. But it needs a veritable miracle to break through and cross the boundary of infinity, it is only by self-renunciation that the mind can hope to be raised to that higher perfection which ends its quest. "What remains to be said, except that man's vocation is to live in God and through God? All philosophy that does not find the end of its quest in religion is formal and abstract, either a mere aspiration or a wild and unreasonable mental exaction. It is in God and in Him alone that we find, in its reality and plentitude, being, movement, and life. We can only cease desiring our own will and way if God condescends to desire His will in us."²⁴

These words, in which Boutroux, when at the point of death, summed up the final conclusions of his master Lachelier's thought, might also serve to define the outline of his own research.

Lachelier used to reproach Boutroux, who was an admirable historian, on the ground that he was too exclusively a historian. "To understand and judge of a system," said he, "the first condition certainly is to enter into it, but the second is to escape from

²³ *Bulletin de la société française de philosophie*, March, 1913, p. 99.

²⁴ *Revue de Métaphysique et de Morale*, 1921, p. 18.

it, that is, to regard it from an outside point of view and, if possible, from a higher one than that of its author." Boutroux, who in a marvelous way could enter into the thought of others, would experience some reluctance, or some difficulty, when it came to judging it from outside. Possibly it was the sole weakness of his great mind that he exercised with regard to doctrines the charity that he practiced in so admirable a fashion with regard to men. But from that period also (1868) is manifest in him the bent which was, as it were, the secret spring of his mature thought. I mean the definite leaning to *realism* which he embraced in opposition to Lachelier's idealism. This attitude of mind was to lead him to throw over the mathematical necessity in which Kant saw the type of objectivity, and to seek in contingency the hallmark of reality, of "that reality distinct from the mind, which the mind perceives, but does not create."

Boutroux' own work was to grasp, in a synthetic intuition and at a single glance, the center around which philosophical doctrines were revolving, and over which all the engagements were being fought—the problem of the relations between science and ethics, necessity and liberty. Like Socrates, he reversed the terms of the problem, and propounded it as it ought to be propounded. Now a problem well propounded is a problem solved.

The common way of putting it was to say: (a) Science demonstrates that the cosmos is governed by a mathematical determinism. (b) Now this determinism is of the kind to be ruined by a single exception, consequently (c) such an exception is impossible. Where we think exceptions to this

determinism have been perceived, we are but dealing with persistent illusions of our minds. Contingency and liberty, being impossible, do not exist.

Boutroux said: Consciousness, giving the lie to science, affirms that I am free. Scientific theories must yield to this testimony of consciousness. In other words, he accepts the minor premise (b) of the syllogism. But he rejects the major premise (a), *for the initial principle whence one must start is not determinism, a mere structure erected by our understanding. It is liberty, which obtrudes itself on our consciousness as a fact.*

Henceforth the conflict between determinism and liberty will be resolved by a solution the very opposite of the one then ordinarily admitted—for liberty and *against* determinism. If it be true, as it is, that (b) a mathematical determinism is incompatible with liberty, as on the other hand it is true that (a) liberty is an undeniable fact, it must be that (c) there is something more than a mathematical determinism at work in the cosmos.

But Boutroux goes further yet. He is not content with a solution, somewhat unsatisfactory when all is said, which would consist of placing the two realms, determinism and liberty, side by side, and making of man an empire within an empire, a free empire within an empire subordinate to necessity. He discovers (and in this he is backed up by his masters, Ravaisson and Lachelier, and by his friends, Henri Poincaré and Jules Tannery) that the determinism that rules the physical universe is not a determinism of a mathematical kind. Instead it is a form of determination such as that shown by "the being inherent in consciousness, which lives through

feeling, governs through intelligence, and is free and creative through activity," in such fashion that this being can "give a reasonable account alike of the contingent being, and of the order and the creation which appear in things." In other words, "necessity is an acquired form, not a first cause; it rests upon contingency and cannot do away with it. The laws of nature are its habits." ²⁵ *The order which rules nature is not determinism but contingency.* •

What is this conception of contingency that Boutroux substitutes for the conception of determinism, that furnishes him with a title for his first book, *De la contingence des lois de la nature* (1874)? He returned to it later in his course on *L'idée de loi naturelle* (1893), and it has contributed to the complete renovation of scientific criticism.

In contradistinction to the necessary and inevitable, of which the contrary is impossible, the contingent is that which happens, but which might have not happened. The contingent, therefore, is in no sense a negation of order. On the contrary, it is the perfect expression of rational order because it is *the order which may miscarry and not come to pass, and therefore must have some reason for coming to pass.* The contingent action is the type of free action. I can do this or that; if I decide to do this, and not that, it is because I have a reason for choosing to do the one rather than the other. Undoubtedly there are in the world an infinite number of events of which it can be said that a reasonable explanation escapes us, and there are the phenomena which we attribute to chance. But reason is

²⁵ This thought formed part of the subject treated by Boutroux in a course of lectures given at Harvard in 1910.

led to conclude, and rightly, that these events display an order which goes beyond our powers of explanation, an order which is conceived by a Reason and planned by a Will that dominates us.

Now this idea of the contingent, once well established, sets a limit to our theories. We can no longer say, for instance, that a miracle is impossible. For what are we calling impossible? That which appears so to us, that which exceeds *our* powers, contradicts *our* theories, and *our* methods of acting. But if a fact *exists*, this fact is not impossible; it is the theories which deny it that are erroneous. Our concepts, the products of our minds, must give way before the facts which are the work of a more powerful mind than ours.

Before the great fact of contingency, both determinism and monism must give way.

Analytical necessity reduces causes to laws, and engulfs the creative power in the womb of the mechanical. When closely studied phenomena prove to us that laws cannot vouch for themselves, that mechanical antecedents are not the causes, but the effects of that which they condition,"* and that necessity, far from explaining the universe, must itself have its explanation and its source in a first principle which the positive sciences are already seeking through phenomena—God. He is the perfect and necessary being, whose creative action we feel in our inmost depths in our efforts to approach Him, the supreme creator and legislator. For Him this universe is not, and never will be, anything but that

* "If the dawn announces the sun, it is because it emanates from it," as Boutroux finely expresses it (*De la contingence*, p. 106).

which He has willed and shall continue to will. For Him the laws He has established are only the instruments of His free will. All contingency proceeds from the great initial contingency, which is creation. This universe is a created universe.

On the other hand, the human intelligence, when it constitutes the universe, can conceive of it only according to the pattern of an absolutely rigid unity, the analytical development of an eternal axiom; hence is derived the monism which is the result of every doctrine that constructs the world, and even God with human ideas. Now facts prove to us that the universe is not *one* in the same way as a mathematical proposition or a machine is one. The universe, as it is conceived by the divine thought and freely realized by the divine will, is the unity of a diversity; it is made up of several worlds, each of which possesses, with regard to the lower worlds, a certain degree of independence. It comprises various orders between which there exists such qualitative discontinuity and such disproportion that it is impossible to pass mechanically from a lower order to a higher. The lower lays down certain conditions for the higher, but it cannot produce it; life makes use of chemistry, but it does not issue from it; the thought makes use of the brain, but it is not its product; grace completes nature, but it is not born of it.

Now this appearance of something new each time we pass from a lower order to a higher is the most exact and complete definition one can give of contingency. It brings unity into accord with diversity. For the higher order appears as if independent, and therefore contingent, if we are regarding it from a

lower grade, in the sense that it does not find its *raison d'être* there. But, on the other hand, if we were to view things from above the hierarchy of orders, we should perceive between them a true unity and continuity, grace beaming upon created nature, spirit lighting up matter.

According to the words of his most intimate and best-loved master, Pascal, words which he loved to quote to me, and regarded as the most profound in the whole range of philosophy, "All is one, the one is in the other, like the three Persons of the Trinity." In God, and in God alone—the principle of order—is realized the supreme unity, not a subduing and tyrannical but a harmonious unity, which unites individuals perfectly without absorbing them, and makes perfect order compatible with sovereign liberty. If our civilization does not return to God, it will founder, like the "elect people, in a cultured barbarism."²⁷ And for this reason, as Boutroux sums up, "Ethical education comprises two tasks: (1) to teach men to rule themselves, to render themselves capable of effort and sacrifice; (2) to teach them to be serviceable workers in the cause of the good, the just and the ideal—in a word, in the cause of God. To be and to do. . . ." That is the whole man. And man, God's tool, is not truly man until he makes himself, as St. Paul expresses it, a "worker together with God."²⁸

Such was the milieu in which Bergson's work first saw the light. Placed to some extent at the con-

²⁷ *Revue des Deux Mondes*, Oct. 15, 1914.

²⁸ Cf. a lecture by Boutroux on "Thought and Action" (Oxford, 1918), and his article on the reform of education in *La France nouvelle*, May, 1919.

fluence of these two currents of thought, and taking of its best from each, he set out in the beginning from English empiricism, from Mill's positivism and Spencer's evolutionism. But he also at the start turned his back on Kant and the German idealism. On the other hand, he was the pupil and, in some respects, the successor of Boutroux, as of Ravaisson and Lachelier, and the further he advanced the more and more akin did he become to Maine de Biran and to Pascal. Bergson made a fresh and vigorous effort to reconcile metaphysical exigence with positivist methods, or, as he himself says, "to carry metaphysics into the domain of experience and, by making an appeal to science and to consciousness, and developing the faculty of intuition, to constitute a philosophy capable of providing, not only general theories, but also concrete explanations of particular facts. Philosophy, thus understood, is capable of the same precision as positive science. Like science, it may progress unceasingly by adding together the results once obtained. But it will aim besides (and it is in this respect that it differentiates itself from science) at extending further and further the confines of the understanding, even were it to shatter certain of them, and to expand human thought indefinitely." **

Hence the question will no longer be how to construct an illusory universe, the principle and end of which would be sheer nothingness; it is now a case of finding the real universe once more, such as it is and such as it continues to be. This is properly the object of that *positive metaphysics* which Bergson proposes to found. And it is upon these bases that

** *La philosophie*, p. 19.

he has established, against determinism, the fact of liberty; against materialistic monism, the reality of the spirit; against pantheism in general, the fact of creation.

CHAPTER II

THE MAN AND THE WORK

It is always difficult to talk about a friend, for when speaking of him the feeling is present constantly that we may say too much or too little. If too much be said, there is a risk of violating the sanctities of friendship; on the other hand, to tell too little, or less than the whole, is to go through the painful experience of feeling that we have fallen short of the truth, and have not done perfect justice to the man. The difficulty is even greater still in the case of one who by his work and his influence belongs to humanity, because what is thus said about him bears upon the interpretation of what he has done.

One expedient open to us would be to say nothing about the man—to study his work in the abstract alone, in order to bring into relief the intrinsic worth of the ideas it interprets, or else merely to reinsert it in its original historical setting, so that it may be bound up with the context of the thought of its day. But is such a course legitimate? Is it even possible? I very much doubt it. In reading an author, the reader involuntarily makes a picture for himself of the man. Through a psychological transference of the work, he creates a more or less artificial semblance of the author which runs the risk of being

a false portrait and at the same time of falsifying the ideas he represents. Upon the whole, then, it is better to have an approximate resemblance, provided it be not an unfaithful one. It will allow his work to be read from within, instead of reconstructed with elements foreign to it.¹ His work will become alive again in our minds, with a life which is not fictitious but real. It places it in its true environment, its internal one. Its echo will reverberate as harmonics reëcho the fundamental tones. In any case it helps us to grasp the design and, as a consequence, the real significance of the work. Now *that which truly matters* in a man's work, gives it meaning, is its life and the part of it which will endure, *is not so much what he said as what he meant to say*. But to get in touch with this, you must know the man. "You will sometimes find," writes Bergson, "that in the best pupil of a great master there is a more systematic exposition of his doctrine, as well as an appearance of greater clearness. This is just because he has followed up the dominant ideas of the system with a reasoning that is simpler and more abstract. But we must go back to the work of the master to get into communication with the depths of his own reasoning, which is modeled upon reality, plastic like life, and, like nature, capable of presenting ever fresh elements to our thought which would attempt in vain to exhaust them by analysis." We must go back to the work; and I should add, even to the mind also which conceived it.

¹ Upon the impossibility of reconstituting a philosophy from the elements of previous or of contemporary philosophical systems, that is, with that which is foreign to its thought, cf. Bergson, on "*L'intuition philosophique*" (Bologna Congress), *Revue de Métaphysique et de Morale*, 1911, p. 810.

Bergson's life,² like his work, is remarkable for its unity, or rather, for its continuity and its "interiority." It seems as if the influences exercised by external events and surroundings upon his life were reduced to a minimum.

At the Lycée Condorcet he went very far in his classical studies, and this should not be forgotten, for the intellectual training that he received in childhood and youth left an undoubted impress upon the work of his mature years. On this point let us listen to the words of one of his schoolfellows, René Doumic, who knew Bergson in those days, and in welcoming him to the membership of the *Académie*

² Henri Louis Bergson was born in the Rue Lamartine, Paris, Oct. 18, 1859. He studied at the Lycée Condorcet, and in 1878 entered the Ecole Normale Supérieure, on the literary side. *Agrégé* in philosophy in 1881, his first experience in teaching was as professor of philosophy at the Angers Lycée (1881); then, after having been appointed (Sept. 2, 1883) to the Lycée at Carcassonne, he was made professor of philosophy in the Blaise Pascal Lycée at Clermont-Ferrand. He remained there until 1888, being moreover, from the school year 1884-5, appointed to deliver two philosophical lectures weekly in the Faculty of Letters there. In November, 1884, he declined to give a Complementary Course in the Faculty of Letters in Bordeaux. He was a professor at the Rollin College in 1888, D.Litt. in 1889, and afterwards he was professor at the Lycée Henri Quatre, from 1889 to 1897; lecturer at the Ecole Normale Supérieure from 1897 to 1900, and finally professor at the Collège de France, where he first of all occupied the chair of Charles Lévêque, and then succeeded Gabriel Tarde in the chair of Modern Philosophy. In 1921 he was followed by Edouard Le Roy. Bergson was made a member of the *Académie des sciences morales et politiques* in 1901, and in 1914 he was elected a member of the *Académie française*. He is also Grand Officer of the Legion of Honor, and a member of the Council of the Order. When the League of Nations appointed a Committee of twelve members for intellectual coöperation, Bergson was appointed its president; he resigned this post in 1925 on account of his health. This committee is responsible for the *Institut international de coopération intellectuelle* opened in Paris, Feb. 16, 1926.

française gave the following delightful and accurate sketch of him. "You were already famous then," he says. "You have always been famous. And you know with what intense curiosity every one looks for the first time upon a famous man or even a famous child; his image is registered forever in the memory. I recall the fragile-looking youth you were in those days, with your tall, slender, slightly swaying figure, your charm so delicately fair, for your abundant fair hair, inclining slightly to red, was then carefully parted on your forehead. That forehead was your most striking feature, broad and bulging, and it might not unfairly be described as huge in contrast with the thinness and refinement of the lower part of the face. The eyes below the arch of that lofty forehead looked out with a slightly astonished gaze, an expression noticeable in reflective persons, unmistakably honest, but veiled and solitary, withdrawn from the other world and turned within. In your demeanor a good deal of gravity was mingled with much graciousness—a smiling gravity, and a simplicity which was not forced, a modesty that was unaffected—and such good manners! You said little, but that little was uttered in a clear, sedate voice, full of deference to your companion's opinion, especially when you were proving to him in your quiet little way, and with that unconcerned air of yours, that his opinion was an absurd one. We had never seen a schoolboy so polite, and that made us regard you as somewhat different from ourselves, though not distant—you were never *that*, and you never have been—but rather, somewhat detached and distinguished. From your whole personality emanated a singular charm;

it was something subtle, and even a little mysterious. . . ."

Bergson's mathematical gifts were coupled with great subtlety of penetration. He had both that *esprit de géométrie* and that *esprit de finesse* that are essential to the formation of a complete, well-balanced mind. He himself affirmed the necessity of this union on many occasions, beginning with the speech he made upon "Good Sense and the Classics," at the prize distribution of the *Concours général*, in 1895, and more recently when he had to speak, in his capacity of Member of Council upon Public Instruction, on the projected reform in secondary teaching.⁴ Always, and under all circumstances, he most energetically championed the cause of the Humanities and of the Greco-Latin tradition to which France is heiress, for such is her historic rôle,

⁴ Vide the author's edition of Pascal's, *Pensées sur la vérité de la religion chrétienne* (Paris, Gavolda, 1925), p. 13.

⁴ Bergson's idea, as he propounded it to the Council, at the Institute, or with the pen, and as he repeated it to me on Dec. 29, 1922, was as follows: The secondary teaching given in the classical schools to the intellectual élite would be the teaching of Greek and Latin, with a thorough, but not extensive, training in science, and the study of one modern language; it would prepare exclusively for a liberal career. On the other hand, in *special* and *separate* establishments, a modern secondary education would be organized, designed to prepare the "officers" of the active and manual careers, such as industry, agriculture, etc. This would still be a secondary training, for it would be given by professors who had received a classical education themselves. Now even if it is impossible for a child of ten or twelve to specialize, it is quite easy to tell . . . even before he has reached that age, whether he has a taste for study, and if he should be directed toward the full secondary training. These ideas, especially the main principle of the separation of the two kinds of schools, were the subject of fierce discussions in the Chamber, (the sitting of June 8, 1923). Cf. Léon Bérard, *Pour la réforme classique de l'enseignement secondaire* (Paris, Colin, 1923), pp. 66-72.

or at any rate one phase of her mission to the world.

Here, however, an objection naturally calls attention to itself. That these liberal studies grace and embellish the mind there is no manner of doubt, but do they possess the practical efficiency we have a right to expect from them? Do they contribute to the formation of "citizens alive to their public duty and prepared to perform it"? To that problem thus couched, Bergson unhesitatingly answers "Yes." "One of the greatest obstacles to liberty of thought," he says, "is to be found in the ideas that language brings to us ready-made; ideas which we breathe in, as it were, from the milieu that surrounds us. A classical education, as I see it, precisely attempts to break through this ice of words, and get to the free flowing current of thought beneath it. While you students are endeavoring to translate the ideas of one language into another, your classical training is accustoming you to crystallizing them, so to speak, in many differing arrangements. In this way it detaches them from any verbal form that is definitely fixed, and invites you to consider the ideas themselves, independently of the words. Thus the virtue of a classical education is to "free our thought from automatic action," to "do away with symbols," and "accustom us to see." ⁶ Supplemented by history, which helps us to understand the present, and by geometry and physics, which so admirably aid us—provided that we study them thoroughly—to grasp

⁶ Concours général. *Distribution des prix*, 1895 (Delalain Bros, University printers, Paris), pp. 5, 12 *et seq.* These valuable pages are unprocurable nowadays, for the documents, official and otherwise, merely reproduce the reply made by Raymond Poincaré, at that date *Ministre de l'Instruction Publique, des Beaux-Arts et des Cultes*.

the peculiar goal of methods which we lightly make use of to some extent every day, a classical education will moreover help our minds to drop the habit "of a too abstract way of judging," and also "to turn away from ideas that are too simple to stop the intellect from slipping down the incline of easy deductions and generalizations, in short, to preserve it from too great self-confidence." In a word, it will teach us "to follow the articulations of reality," and in this way it will prepare us to exercise that effort of free will which should be the mainspring of our action, and that passionate love of fitness and righteousness (*justesse et justice*) which should be the very sustenance of our thought. This work will be completed by philosophy—a philosophy, moreover, closely bound up with positive science as well as with a taste for and the practice of acute observation, which will closely follow the contours of interior as well as external reality.

In thus describing the rôle and the function of each of the studies which constitute a classical training, the training of the exceptionally gifted, Bergson very exactly indicated what his own training had been. This mathematician was also a finished humanist, to whom was awarded, at the *Concours Général*, the "Honors Prize" in rhetoric as well as in mathematics. Occasionally he was a philosopher; some one said of him that he wrought out excellent philosophy by the sweat of his brow, and better mathematics still—and did it with a smile. For some time these two sciences contended for him. As his professor of philosophy he had Benjamin Aubé, a Cousinian, a ready conversationalist and erudite and artistic teacher, who, nevertheless, busied himself with everything but philosophy, and loved to chat

upon archæology or history, ancient coins or Christian martyrs, with his pupils. In other respects he was also the most unsystematic of men. For this Bergson was always grateful to him, for students usually begin their work as instructors by echoing their first master in philosophy and teaching his course of lectures. Yet more, they adopt his attitude, and to pupils attitude is much more important than ideas, in which they do not go far wrong. This eclectic, therefore, whose Cousinianism was not the exacting kind and who took good care not to hang a heavy yoke, or even leave his stamp, upon his pupil's thought, kept him from undertaking any sort of systematizing, and at the same time rendered him the invaluable service of shielding him from the German influence then dominant, and possibly disposed him, to come back one day to the most original and profound of all the eclectics, Maine de Biran.

Nevertheless, mathematics claimed Bergson more ardently and insistently. Desboves, his professor, was proud of a pupil who solved the most arduous problems as if in play, notably the famous one of the three circles* which Pascal said he had solved with the ruler and the calliper alone, that is, without using either equations higher than the second degree,

"... De trois cercles, trois points, trois lignes, trois quelconques étant donnés, trouver un cercle qui, touchant les cercles et les points, laisse sur les lignes un arc capable d'angle donné. J'ai résolu ces problèmes pleinement, n'employant dans la construction que des cercles et des lignes droites; mais, dans la démonstration, je me sers de lieux solides, de paraboles ou hyperboles; je prétends néanmoins qu'attendu que la construction est plane, ma solution est plane et doit passer pour telle" (Lettres, etc., p. 8).

or the ellipse and the parabola. None of those to whom Desboves had ever given the problem could find that "plane solution" of Pascal. It called for a species of adroitness or knack. Bergson had it, and his solution, which Desboves recounted in his study of Pascal as a scientist,⁷ like his solution of the problem set at the *Concours Général* in 1877, which was published in the *Annales de mathématiques* of 1878, evoked the admiration of mathematical experts. Bergson's genius, moreover, was above all geometrical. Algebra seemed to him a convenient language, but he viewed things spatially.⁸ In spite of these other gifts, he finally chose philosophy. He found mathematics "too absorbing," and he reckoned upon doing something else with his life. "It is a foolish resolve," said Desboves when he heard of his decision. "You might be a mathematician, and you will only be a philosopher. You will have missed your vocation." Would Bergson have been "a mathematician"? It is quite possible, although the higher mathematics demand very special aptitudes. But at any rate we may well believe that humanity lost nothing by his decision to the contrary.

We find him then at the Ecole Normale, in the same year as Jean Jaurès and Mgr. Baudrillart. Those who knew him then have described him as pleasing in appearance, rosy-cheeked, with a slightly ironical air, polite, courteous, and obliging to every-

⁷ Desboves, *Etude sur Pascal et les géomètres contemporains* (Paris, Delagrave, 1878).

⁸ Just as he viewed spatially those "light-images" (*figures de lumière*) of which he is writing in Chapter V of *Durée et simultanéité*. According to him they also impose their conditions upon the rigid figures in space, in the Theory of Relativity.

body.* Already, however, he is somewhat imposing, as much by his intellectual superiority as by his reserve, his good education, and that natural distinction of mind and bearing which, without going as far as prudishness, offered such a strong contrast with the somewhat free-and-easy behavior of those around him. Some of them to whom this attitude of his appeared inexplicable, charged him with a touch of pose, a trace of superiority, and they accused him of regarding himself as a different kind of clay from his fellows. As all agree, however, he was very far from possessing the 'immense self-confidence of Jaurès, who appeared to others as well as to himself like some force of nature.¹⁰ While he disarmed them by the very ingenuousness of his self-confidence, yet

* To some extent the dainty portrait he sketched of the well-mannered man in the speech he made at the prize distribution of the Clermont-Ferrand Lycée, Aug. 5, 1885, might serve as a likeness of himself when he said: "The accomplished man of the world knows how to talk to each one of that which interests him; he enters into the views of others without always adopting them; he understands everything, but he is not on that account ready to excuse everything. Therefore people like him almost before knowing him. They believed themselves to be addressing a stranger, and they are astonished and delighted to find they are dealing with a friend. What we admire in him is the ease with which he can stoop or rise . . . to our level; and especially it is the art which he possesses of leading us to believe, when he is talking to us, that he has some unacknowledged preference for us, and that he would not be the same to everybody else, for the characteristic of this very well-bred man is to love all his friends equally, and each one in particular even more." (Quoted by J. Desaymard, *H. Bergson à Clermont-Ferrand*, 1910, p. 12, according to the *Moniteur du Puy-de-Dôme*, Aug. 6, 1885.) But we must not conclude (for it would be quite contrary to the truth) that Bergson was not capable of preferences, or of real friendship; politeness in his case was only an expansion of kindness.

¹⁰ See the 'vivid and amusing portrait sketched of him by Maurice Barrès in his *Enquête aux pays du Levant* (Paris, Plon), Vol. II, pp. 178 *et seq.*

it somewhat irritated them to have him always go about accompanied by incense-bearers, one of whom would assent to everything he said, and the other preserve an admiring silence. Bergson was still further removed from the dogmatic assurance of Durkheim, who was much more self-willed than intellectually arrogant and who loved to involve his comrades in his dilemmas, trilemmas, and tetralemmas, shouting out from the top of the staircase, "Of four things, one. . . ." Jaurès and Bergson, however, got on very well together; both loyal souls in a certain sense they were the complement of each other because they possessed qualities that were diametrically opposed. The one viewed a thing broadly, the other saw it in detail.¹¹ The one handled questions in the mass and laid them low; the other examined them patiently, dissected and dismembered them in the endeavor to hit upon the best means of solution. The one talked, and talked loudly; the other reflected. Bergson was not, however, either supercilious or priggish, but he loved the peaceful seclusion and the silence favorable to meditation. He was little to be seen in public; he was scarcely ever present in the company of his comrades, either in the Ecole Normale or outside. In spite of the efforts made to draw him thither, he was not seen above three or four times in the café frequented by the beardless youths who were irritated by the beard and the thundering eloquence of Jaurès. In the school, Bergson had had himself appointed student-librarian, and he passed almost all his time in the city of books, in a room to which access was sedulously reserved for a few discreet friends upon a given signal.

¹¹ It used to be said, "*Jaurès voit gros, Bergson voit fin.*"

He was known, then, for his extremely daring thought, in circles which no degree of daring could dismay. He seemed to be very "English" in his training and his mental bent, far removed from Kant and German philosophy in general, although living in a generation saturated with Kantism, which, on that account, regarded him as an anomaly. Bergson used constantly to read John Stuart Mill and especially Herbert Spencer, reproaching them merely with a lack of logical finality.

In those days some of his fellow-students looked upon him as a virtuoso; playing at philosophy as he might play at chess; as a satirist, especially apt at giving point to epigrams upon both situations and men whose characteristic features and weak points he was very acute to discern; and again as a dilettante, himself only half convinced of the doctrines he advocated, and above all anxious to be original. He was even taxed with destructive tendencies and suspected of going as far as outright mechanism, indeed, even to materialism. One day, at the Ecole Normale, as René Doumic tells us, seeing some of the library books on the floor, one of his masters, Goumy (the one whom Sainte-Beuve called "the spiritual Voltairian"), turned to him indignantly, saying, "Monsieur Bergson, you see those books sweeping up the dirt; your librarian's soul ought to be unable to endure it." Immediately the whole class cried out, "He has no soul." He was not, however, either a dilettante or a materialist, as those who knew him best then can testify. Behind a mask of irony,¹² he was seeking, even in those days, the

¹² Cf. Descartes' expression, in his *Cogitationes privatae* of 1619: "*Larvatus prodeō*" (Adam-Tannery), Vol. X, p. 213.

truth; and this sense of truth and this love of truth only grew on him as his experience and his feeling of responsibility developed. On the other hand, even at that time he had too pronounced a taste for the exact sciences and for positive methods; he still professed too great a contempt for metaphysics, or, more precisely, he was too indifferent to metaphysics and too little interested in such questions to adopt any scheme of metaphysics whatever, whether materialistic or otherwise. It is true, however, that he was inclined toward mechanism, and that, beyond that, when confronted by a spiritualism that was somewhat vague or ill founded, it all seemed arbitrary to him.

It must be owned then that during his student days his masters do not seem to have exercised any decisive influence over him. In his first year he had Léon Ollé-Laprune; in his second and third year, Emile Boutroux. Lachelier had just left the *Ecole Normale*, his notes of lectures still passed from one student to another clandestinely, and his impress remained lasting, though concealed. Not until later did Bergson come in contact with the thought of that incomparable master, whose dialectic, not wholly free of the German ideology, was not entirely congenial to him. Ollé-Laprune, a choice, ardent, generous, and lofty soul, profoundly influenced a small number, like Victor Delbos and Maurice Blondel, who caught the luminousness of their master in their admirable rendering of his thoughts.¹⁸ Although they all may have recognized (as Jaurès declared when he was unjustly suspended) his perfect tolerance, frank-

¹⁸ See Maurice Blondel, *Léon Ollé-Laprune* (Paris, Bloud, 1923).

ness, sincerity, and his spirit of benevolence and kindness, many found fault with him for repeating the same things over and over again, in a monotonous tone, things that were old and stale as well. His teaching either passed unnoted by or rose above the heads of a youthful generation anxious above all for deliverance, ready to break a lance with all traditions. They found or pretended to find it extraordinary that any one should believe in God, and above all that proof of it should be offered. When the problem of the immortality of the soul was propounded to them, the first thing they did was to call in question the existence of the soul itself. They were not materialists in those days, but positivists, saturated with Taine and Renan, and largely devoid of all belief. In the strife between science and ethics, they were pretty well disposed to deny ethics to the profit of science. What influence did Boutroux have on these youth exactly? Boutroux, who in those days read all his lectures, adhered strictly to the history of philosophy, and above all to Kant and the German school (of which he had been a pupil at Heidelberg in 1869). Very rarely did he allow himself to criticize or pass judgment on any of the doctrines of philosophy. He opened up to his pupils, to Bergson preëminently, a method of grasping a systematic history of philosophy by apprehension from within. But this philosopher, possessed of so much heart, used his head more than his heart in his philosophizing. He hardly ever gave an opinion of the fundamentals of his subject, but carefully refrained from any personal explanation which might draw attention to bold, original work that he had done by which the

bases of the current determinism had been rudely shaken. He exerted an undermining influence in this direction, however, through his work, and there is little doubt that he helped to attract Bergson's attention to the problem of free will and all that it implied in psychology, ethics, and metaphysics, at a time when Bergson was inclined to waive aside all questions of transcendentalism as chimerical.

Bergson obtained the second place at the *Agrégation de philosophie* in 1881, ranking after Lesbazeilles, and before Jaurès, the senior student of his year, who considered the third place a "dis-honor." As a matter of fact, Bergson had worked much more at mathematics and physics than at philosophy in the Ecole Normale, and at that time he was first and foremost a mathematician. His disdain for psychology was extreme, and when he happened to draw in the oral part of the examination a psychological subject from Lachelier's hat, he could not conceal his vexation; he made an "unsatisfactory lesson," wholly negative, out of his assignment. He came to understand later that what he disdained was not psychology in itself, but the psychic mechanics which then passed for psychology, but which was its negation. It was probably a kind of instinct, "a preëstablished harmony" between psychology and himself, therefore, that led him to combat the psychology of his day, and enabled him to discern at once the falsity of the principle underlying it.

However that may be, the paramount influence exerted upon his mind at that time was that of Spencer. So he dreamed of extending the applica-

tion of the mechanistic explanation to the entire universe, only in a form rather more definite and condensed. To accomplish this aim, he made use of all the resources which assiduous practice in the sciences had conferred upon him, as well as—a circumstance more valuable than aught else—a force within him which was the governing principle of all the inner development of his thought. By this force within, I mean a mind disciplined to respect the true;¹⁴ the will and the habit of subjugating his thought to what was real instead of subjugating reality to his own ends. For this reason, instead of pretending to make facts conform to his mechanistic prejudice, as a mind that was systematized would have done, he was fully resolved, being himself mechanistic only from love of exactness, that his theory and even his methods were to be plastic in the extreme to the demands of facts—in other words, to reality.

Now whilst he was attacking the world as a mathematician, a mechanist and almost a materialist, reality resisted him—*the* reality, or rather *one* reality, time in the true sense of duration.

Bergson set out to reconsider from its very founda-

¹⁴ Doumic, in the speech already mentioned, has thrown a good deal of light on this matter, in which Bergson differs from all the *scientisme* of the nineteenth century: "In freeing philosophy from the domination which the sciences were unduly exercising over it, you have nevertheless not belied your scientific training. Quite the contrary, in fact. You knew more of science than the philosophers who were your predecessors; and on this account you recognized the sphere and noted its limits better. Where they had but a superficial smattering, you possessed long practice and familiarity. It was your extensive knowledge of the sciences that enabled you to deliver philosophy from a yoke that was only apparently scientific . . . and that for the greater honor and benefit, not only of philosophy, but also of science itself."

tion, Spencer's *First Principles*, with the intention of defining and examining more thoroughly certain ideas of mechanism which Spencer makes use of without sufficient competence. When he came to the idea of time, he realized very clearly the insufficiency of Spencerian philosophy; he recognized that the weak point of his system lay there. He perceived that his "evolution" was no evolution, *that the idea of time, conceived by that mechanistic philosophy, is a distorted and debased idea, materialized, as it were, by contact with space. It can never represent either true movement, such as common sense shows it to us, or real duration, such as we experience within ourselves through consciousness.* Then, all that he had slighted up to that time, as of secondary importance, now became the essential matter.

Bergson had been seeking a *proof* of a conclusion which he already believed. The proof put the conclusion to flight. The mechanist theory was shown incapable of accounting for that which is; he boldly dropped it and held on to reality. Distinguishing method from doctrine, he retained the old demand for clearness and precision which he transferred to other subjects, beginning with psychology. He had put a question to nature, and nature answered No; he gave up his old conclusions and followed nature.

It was during the seven years of fruitful retirement spent in the provinces—at Angers and at Clermont-Ferrand—that this decisive evolution in Bergson's thought took place. At Angers, Bergson had a habit of taking walks through the delightful country bordering on the Loire, and while walking he would reflect upon and put his ideas to the test.

Out of his very gropings there rose up in his mind, vaguely at first, then becoming more and more distinct, an uncomfortable feeling destined to be dispelled the day its source was recognized. It was at Clermont he began to see clearly; there he woke up to the fact that his mental discomfort and hesitations of thought arose from not taking mobility and change into account, and that Spencer's failure to recognize them was the reason that his explanation also did not explain as it claimed to do. He realized that the impotence of philosophers and their inability to furnish him with a satisfactory solution was closely connected with their silence in regard to time, or else to their assimilation of it with space.

At Clermont, therefore, he went through the crisis from which his thought emerged, renewed and reinvigorated.

There are predestined spots in nature, places where the mind can breathe freely, and the very atmosphere is like a mute inspiration; Clermont is one of these. There the young philosopher found not only a spot favorable to meditation, and the most serious and steadfast minds which he had ever encountered, but there, too, the recollection of Pascal was still very active, and the mighty shape of that incomparable thinker unconsciously controlled his train of thought. Bergson at that time would have been greatly surprised to be told that one day his thought would be akin to that of Pascal. Nevertheless, from the day some years before when it was oriented to truth, the whole course of its development only brought him nearer the author of the *Pensées*.

One of his pupils has left us his recollections of the crisis which Bergson went through, or at any rate, of its visible signs: "Henri Bergson used to enjoy short familiar walks in which the body can take healthy exercise without the mind's being distracted by novel sights and sounds. Frequently, on leaving the Lycée, he would go beyond the Boulevard Trudaine, where he was living, and allow himself to wander, following the thread of his thought as far as the ancient Place d'Espagne, where he paced up and down."¹⁶ It was at the end of a course in which he had lectured to his pupils on the Eleatic system of reasoning that the *idée maîtresse* of his doctrine revealed itself to M. Bergson."¹⁶ Strictly speaking, it must be said that the arguments of Zeno served as the occasion that caused Bergson's ideas to crystallize and that they furnished him with the means of expounding, both to himself and others, the great discovery which he had at last made.

Bergson himself told, in words not to be forgotten,¹⁷ how a philosopher happens to come into contact, if not with the unique intuition from which his whole doctrine proceeds—that "something simple, infinitely simple, so extraordinarily simple that the philosopher has never succeeded in uttering it"—at any rate into contact with a certain

¹⁶ At Clermont Bergson lived at 38, Route d'Aubière, then 7, Boulevard Trudaine, facing the Estaing barracks. He also liked to walk along the road which goes from Clermont to Beaumont, amidst the vineyards which are dominated by a fine range of hills.

¹⁶ J. Desaymard, "*La Pensée d'Henri Bergson*" (Paris, *Mercure de France*, 1912), p. 11.

¹⁷ *L'intuition philosophique*, pp. 810-11.

intermediate image between the simplicity of such a concrete intuition and the complexity of the abstractions which interpret it, an image resembling a shadow in this respect, that it allows the attitude of the body projecting it to be defined.

"The first characteristic of this image . . . is its power of negation; it forbids. When the philosopher finds himself confronted by ideas currently accepted, by theses appearing to be evident, by affirmations hitherto reputed scientific, it breathes into his ear the word—*Impossible!* Impossible even when both facts and reasons seem to invite belief that it is possible and actual and certain. Impossible, because a certain experience, confused perhaps but decisive, is felt to be at variance with the facts that are alleged and the reasons that are given, and therefore these facts have not been noted aright, these arguments are false. It is a strange power, this instinctive power of negation. . . . Later [the philosopher] may vary in what he affirms; he will not vary in what he denies. And should he vary in what he affirms, it will again be by virtue of the power of negation immanent in the intuition or in its image."

It was this power of negation which the Bergsonian intuition bore along with it, even to its fountainhead. Like the daimon of Socrates, intuition halts, inhibits. It made Bergson halt on the descent to mechanism; it forbade his acceptance of the mathematical and mechanical conception of movement, that is, of nature. Its impossibility was then entirely obvious to his perception, and if he did not yet see clearly what duration was he saw very distinctly, once for all, what it was *not*. "The opposi-

tion between spatial time and duration, or rather, the feeling of the contradiction inherent in a duration representable spatially, showed me," he tells us, "the impotence of mechanism."

Bergson had arrived at one of those crossroads in life where several paths lie open and we can choose which one to take. But that choice once made and the path entered upon, we cannot return. Free will has put itself under a law of its own making, it is moving toward the truth, it has recognized her law, and this perfect submission of man becomes the perfect exercise of liberty.

Thereafter Bergson's thought developed with marvelous continuity along the line it was pursuing in its quest for the truth.

If mechanism does not introduce us to time, where are we to seek its true nature? In consciousness. Bergson knew that one question leads to another. He saw that after a certain point in his study of consciousness he would have to investigate how it comes to terms with matter. But he does not lay down any ready-made scheme, any set program, or predetermined solution. Above all, he never proposes to demonstrate a theory. His thought has grown and matured within him without his guidance, as far as he can tell; it has drawn him on toward horizons of which he had no previous idea. But, rightly or wrongly—and this is the dominant trait in his character—he does not like to carry his thought, or see it carried, beyond the point to which the natural progress of his reflections would have brought it anyway. In his judgment the main task

for all research is to differentiate very carefully facts from hypotheses and never to put them on the same plane or accord them the same consideration, since the uncertainty of the one will be reflected upon the other and throw doubt upon the whole system. The end and aim of all research is the comprehension of reality—the recognizing of reality and the forming of our minds upon it as a model. Reality is like an immense forest strewn with impediments of all kinds, through which the seeker, like the woodcutter, must open up trails. Many of these trails will end in blind alleys. Sometimes two of them happen to join, and then light begins to break through, and from this juncture there springs up in the mind a consciousness amounting to conviction that truth has been grasped.

This is a method calling for extreme circumspection and a consciousness possessed of sensitiveness in that high degree which confers upon the results thus obtained incomparable evidential value, conviction irresistible in force. This is the method which Bergson henceforth is to apply. He returns to the psychology and metaphysics which he has unfairly abandoned, put his results to tests on a par with the strictness of the exact sciences, and continually seeks inspiration from the facts themselves. Instances like these come to mind: (a) his studies of hypnotism, which form the subject of his first article upon "Unconscious Simulation in a Hypnotic State"; (b) his very enticing and highly appreciated lectures upon laughter and the significance of the comic,^{1*} which sketch the views he

^{1*} Authorized translation by C. Brereton and F. Rothwell (N. Y., Macmillan), 1911.

will advance later upon sympathy by "letting go" and the abrupt stoppage of vital activity, which is a combination of tension and elasticity, by a moment of inelasticity and automatism as the provocation of laughter; (c) the announcement of his lectures at the *Faculté des Lettres*, in which he broaches questions relating to matter, mind, God, and goodness, and proposes to treat them according to a new method, namely, "from the twofold point of view of science and metaphysics."

The ripened product of these beginnings were his two theses for the degree of Doctor: "*Quid Aristoteles de loca senserit*," and the "*Essai sur les données immédiates de la conscience*" (1889),^{1*} a product which marks an important epoch in the history of French thought. To these succeed, in accordance with the flexible, resolute plan he had mapped out for himself, and also in accordance with the rhythmic impulse inherent in his thought, the series of great works that we shall describe at length. They are *Matière et Mémoire*,^{2*} *essai sur la relation du corps à l'esprit* (1897); *Le Rire*,^{3*} *essai sur la signification du comique* (1900); *L'Evolution créatrice*^{4*} (1907); *L'Energie spirituelle*, essays and lectures (1919); *Durée et simultanéité* (apropos of Einstein's theory of relativity, 1922).

In Paris, whither he was called in October, 1888, to exercise his profession successively at the Rollin

^{1*} Translated into English by F. L. Pogson (1910), under the title *Time and Free Will* (London, Allen & Unwin).

^{2*} The authorized translation by N. M. Paul and W. S. Palmer first appeared in 1911 (London, Allen & Unwin).

^{3*} Translated as *Laughter, an Essay on the Meaning of the Comic* (N. Y., Macmillan, 1911).

^{4*} The authorized translation appeared in 1911.

and the Henri IV lycées, at the Ecole Normale, and finally at the Collège de France, his teaching strengthened its grip as the years went by, and its influence soon emerged from the small circle of his eager and loyal disciples and its illuminating rays began to reach the intellectual world at large. An enormous crowd thronged the hall of the Collège de France and surrounded the platform from which the master would speak, perhaps, of the source of our belief in causality or in concepts, of the notion of time or of human personality, of Plotinus or of Descartes. Among his hearers were philosophers and savants; young men—many of them—eager to learn and to do; men who were weary of an intellectual oppressiveness that had become too prolonged; women in large numbers too, attracted thither by his success, it is true, but equally interested in these vast questions and endeavoring, as one of them expressed it, “to understand part of it with the mind and to divine the rest with the heart.” The personality of the lecturer was no negligible factor in his success. Silence would descend upon the hall and the audience feel a secret tremble within when they saw him quietly approach from the back of the amphitheater, seat himself beneath the shaded lamp, his hands free of manuscript or notes, and the fingertips usually joined. They took note of his high forehead, his bright eyes shining like lights beneath his bushy brows, and the way his delicate features threw the impressive power of the lofty forehead into strong relief and revealed the spiritual radiancy of his thought. His speech is unhurried, dignified, and measured like his writing, extraordinarily confident

and surprisingly clear in statements; its intonations are musical and cajoling, and in his manner of taking breath there is a slight touch of preciosity. In form his language is finished in its perfection, so perfect that one can scarce detect its art, and it appears wholly natural. It is that of a philosopher who is of the opinion that "philosophy, in the deepest probings of its analyses and its most intricate syntheses, is obliged to speak a language understood by all." But how much there is of profundity in this simplicity! Facts drawn from science or from the experience of the inner self, images borrowed from familiar life, nature, or art are constantly used to illustrate the subtleties and fine distinctions in the thought of the philosopher. We grasp them, we believe at any rate that we grasp them, but each of these images, each of these facts, nevertheless, has, if we can express it thus, other secrecies and implications manifold. The forms and the words are retained by our thought; we repeat them, but these words, which denote real things, unlike geometrical abstractions, cannot always be used in the same sense. Recourse must be had to a third dimension to comprehend how it is possible to present the same object under widely different aspects. The words must be put back into their context and surrounded with their own atmosphere if we are to grasp their exact import and hear that import reëcho to infinity. After all, the form is the punctilious servant of the idea. Bergson, like Plato, has proved competent to liberate philosophy from servitude to a vocabulary. He is determined to see the *things* themselves behind the *signs* of words which repre-

sent them. He does not at first endeavor to solve problems at all; he tries to state them rightly, that is, to propound them as a function or form of things by their very constitution. He turns away from cut-and-dried formulas, stereotyped ideas, and systemized theses; he will not clothe thought with ready-made garments, which are always also stock-size garments; it shall have garments to wear designed for it individually. He does not repeat old expressions, he invents new ones, and he asks his hearers to do the same after him, to think over again in ways of their own what he has thought before them, to make an effort like his own, "to sink a plummet into reality." One of his most devoted followers and best disciples, who was always to be seen at his lectures wearing his familiar dark blue cloth cape, Charles Péguy, comments thus: "This denunciation of universal intellectualism, that is, of the universal indolence which consists in forever making use of the mental *cut-and-dried*, will prove to have been one of the greatest victories and the *instauratio magna* of the Bergsonian philosophy. . . . That philosophy wants us to think in a way that fits the occasion, and not to think that there is nothing more left for thinking to do." **

This new philosophy possessed the freshness and the novelty of truth, and seemed to have been drawn from the very fountainhead of the inner life. These characteristics assured the success of the

** "Note sur M. Bergson et la philosophie bergsonienne," in *Œuvres complètes de Charles Péguy* (Paris, Nouvelle Revue Française, 1924), p. 21.

Bergsonian doctrine. It came to all with a sense of liberation.

Better support for this conclusion comes from hearsay than from the official evidence. Hearsay is, in a sense, ever truer than history, because it has retained of history that which was worth retaining, namely, the *legenda*, and thus conveys to us, under cover of facts given in a form more or less materially correct, an impression of man or event superlatively fair and accurate. A story has come down of how it upset a professor of Ancient Chinese, or some other specialty of that nature, to have his lecture placed one fine day prior to that of Bergson. He was stupefied to find his lecture room, in which three sedate listeners usually took seats, invaded by a turbulent crowd, impatient to listen to the gospel of metaphysics. Another tale concerns two American women who had crossed the Atlantic expressly to hear Bergson, but as it was the month of August, all that could be done was to show them his lecture room. "Not having been able to hear M. Bergson, they were somewhat consoled by this sight, at any rate, of the hall in which others had listened to him."

As a matter of fact, his renown was widespread in both the New and the Old Worlds. His works were translated and discussed in more than ten languages. After he had read *Matter and Memory*, William James wrote: "It is a work of exquisite genius. It makes a sort of Copernican revolution as much as Berkeley's *Principles* or Kant's *Critique* did, and will probably, as it gets better and better known, open a new era of philosophical discussion." And after

the appearance of *L'Evolution créatrice*, he wrote to F. C. S. Schiller: "It seems to me that nothing is important in comparison with that divine apparition,"²⁴ and he thanked God that he had lived long enough to see this great movement of modern thought. The whole world saluted in the person of this regenerator of metaphysics one of the most profound of thinkers, whom France—and humanity—may well honor.

Like all profound doctrines, Bergson's doctrine radiated in all directions, but always in the direction of truth, of reality. It brought the minds of men back to fresh interest in themselves, and that is the surest way of bringing them back to the truth. "Bergson's teaching was such," wrote one of his pupils, "that in listening to it we never thought of asking ourselves what he was thinking, but only whether the truth that he was thinking so boldly before us might become our truth likewise. When we were listening to Bergson, our attention was not fastened upon *him*, but upon actual things themselves."²⁵ Actual things themselves, once rediscovered thus, caused illusory doctrines to vanish. "Under the twofold influence of Bergson's psychology and Péguy's ethical critique," said Lotte, "the framework of Taine's *scientisme*, Renan's intellectualism, Kant's moralism was shattered to bits as far as we were concerned. It provided an escape from determinism, a soaring upwards toward the rediscovery of God." Lotte, like Péguy, attributed to Bergson the impetus that led to his return to the

²⁴ *Letters of William James* (Boston, Atlantic Press, 1920), Vol. II, p. 179.

²⁵ Etienne Gilson, *Revue philosophique*, Oct., 1925, p. 309.

Catholic faith."²² Some of those who first ardently admired him for his intuitionism, anti-intellectualism, mobilism, even for a pantheism which they foisted on him afterwards, threw them all over and reproached him bitterly on these counts. They then maintained that in order to refute the errors of the moment he had joined hands with those who abandon Being and Mind, i.e. all that is essential in the *philosophia perennis*; even some of them recognized in Bergson at that time "the immense credit"

²² Apropos of a strong criticism of Bergsonism published in the *Amitié de France*, under the title of "*La sophistique contemporaine*," in which Georges Dumesnil endeavored to prove that Bergson borrowed all his philosophy from his predecessors, Kant, Lachelier, Ravaisson, Royer-Collard, and Penjon, Joseph Lotte wrote, in the *Bulletin des professeurs catholiques de l'Université* of Feb. 20, 1912: "I owe Bergsonism a debt of gratitude, and I seize the opportunity offered me of paying it. I do not remember which Athenian in Plato's *Symposium* it is who declares that he has really lived only since he has known Socrates. I should say as much for Bergson, had I not, since knowing him, become a Christian once more. It was the study of his philosophy—a study which I began as a most stubborn materialist—that opened out to me the path of liberty. Until 1902 my mind was fast bound by Taine and Renan. They were the gods of my youth. The *Introduction à la Métaphysique*, read in the *Cahiers de la Quinzaine* in 1903, explained by François Brault, inspired me with an ardent desire to become acquainted with Bergsonism. I studied *Matière et Mémoire*; at the beginning it was very hard for a grammarian such as I was; but I persevered, for little by little the world of the soul made itself known to me. The determinism of my former masters was at an end. The reign of Matter and of Science had concluded. Athene was vanquished. The breath of God inspired the world. . . . I shall never forget my rapturous emotion when, in the spring of 1907, I read the *Evolution créatrice*. I felt the presence of God in every page. One needs to have lived for years without God to know the joy with which one finds Him once more. Bergson's books have led me to find Him again, and for that I shall be everlastingly grateful to them." On Bergson and Péguy, cf. Jérôme et Jean Tharaud, *Notre cher Péguy* (Paris, Plon), Vol. I.

and the rare courage of struggling, almost unaided, in the university, "against the positive materialism so-called and against the Kantian relativism which shared the official world between them." Even they, or at least some of them, owned up that it was to him and to the consuming desire for the true and the absolute that inspired his teaching that a great many owed their intellectual emancipation." His influence was exercised in other directions too. Edouard Le Roy¹⁷ and his following were prompted by his method and his views to criticize scientific data in a vigorous and original way, to demonstrate how much arbitrariness there is in our methods of measuring magnitudes, and to set up a new positivism. Bergson taught the syndicalists¹⁸ to overstep the limits of the particular, as well as of the abstract, and thus rediscover a living order of nature, a creative duration, a *concrète* universal. He taught them a way of escape from the domination of the purely instinctive, as well as of democracy or abstract State socialism, and they fell under the spell of the "myth" which dreams of restoring a purified social life. Even artists profit by his example when they exalt individual intuition and endeavor to reproduce on their canvases "no longer a fixed moment in universal dynamism, but the dynamic sensation itself." Musicians, too, find surprising affinities between his art and the art of a Debussy, who leads us into a fluid realm of pure qualities and seems to evoke that "spectrum of a thousand hues shading into one

¹⁷ Vide Jacques Maritain, *Le philosophie bergsonienne* (Paris, Rivière, 1914), pp. 4, 305.

¹⁸ Vide articles in the *Revue de Métaphysique et de Morale*, 1899 et seq.

¹⁹ Berth, Geo. Sorel, and others.

another by gradations that are imperceptible," by which Bergson denotes pure duration.

Success and fame, however, though they may possibly be necessary to assure widespread influence to a system of thought or a distinguished piece of work, are on the whole more detrimental than useful to them. A human masterpiece charms the crowd only by letting itself become deformed; human thought is propagated only by repetition. Bergson, who shunned ready-made formulas above all things, soon found his thought reduced to formulas. His philosophy, too, which was an attempt at renovation through the rupture of existing artificial boundaries, found itself enclosed in a setting which was no better than the one it had broken through. His extravagant admirers did him yet more of this disservice than his opponents. Bergson possibly perceived this to be so; in any case, he was wise enough to avoid slavery to success and retire from the field in the very hour of triumph, in order that his thought might have opportunity to develop at its ease, and that he might resume again the threads of his meditation which had been scarcely interrupted.

For Bergson is essentially a contemplative. Thus does the man appear to those who have seen him at home in either of his quiet Auteuil dwellings, or in the Saint-Cergue home on the slopes of the Swiss Jura, in which he spends the summer, in company with his wife and daughter. Let me go back nineteen years and recall a visit paid one June afternoon to the Villa Montmorency in the Avenue des Tilleuls there. In a half-abandoned garden, its grass tall and rank, three red peonies are in flower and two cats

are lazily stretching themselves. The house is a silent one, the sitting room unvarying in its orderliness and its atmosphere like a breath of eternity. After a few moments of delay the master opens the door noiselessly and, almost at once, penetrates to the heart of the subject upon which he desires to talk with you. He is interested in you; he is interested in everything; he freely asks your opinion, in the manner which he has so well described as belonging to the timid, sensitive souls who are eager for approval because they distrust themselves."¹⁰ For in him sovereign intelligence is conjoined with an unassuming and modest attitude of mind which is not feigned, but is the hallmark of the genuine truth-seeker, ever fearful lest she should not be served in the way that is her due.

Bergson most aptly described, one day, what is really the secret of his own intellectual life. "All philosophical work that is fruitful," he said, "arises out of concentrated thought with pure emotion at its base."¹¹ Concentration is, indeed, what we need most and most lack. The main source of our ills is the wasteful profusion and dissipation of life and of ideas, exemplified in the innumerable journals and reviews which are constantly demanding "copy" and forcing responses which are nearly always premature. It is also one of the blemishes of our politics and of our parliamentary system in particular; the levity with which responsible men settle momentous questions is terrifying. The attitude seems to be that words can take the place of

¹⁰ Speech on "*La Politesse*" (Clermont-Ferrand, 1885).

¹¹ At the banquet of the *Revue de Métaphysique et de Morale*, Dec. 27, 1923.

action and be all-sufficing, and there can be no more fatal error.

When in America in 1917, Bergson was invited by Roosevelt to come to breakfast with him. That made it necessary for him to be at Roosevelt's home before 8 A.M., and it was a long way off. Roosevelt said to him, "Words are *vile* when they do not lead to action." Words *are* vile, but this did not prevent Roosevelt from talking upon the topic for more than two hours. He probably thought that he was preparing to obtain results, and perhaps he was not mistaken. . . . Bergson admires people who are able to talk without having anything to say, but while he admires them they also frighten him a little. As for himself, he declares that he is absolutely unable to talk for the sake of talking or, for instance, to propose a toast. He cannot, and does not know how to speak except when he wants either to lead the way to action—and teaching is action *par excellence*—or else to obtain a definite result. But in these cases the spoken word accomplishes its natural purpose, which is to put itself at the service of the idea, and not to take its place. Thus he lives in a purely conceptual realm in the retirement of an interior world solicitous of his own thought and highly concerned in safeguarding it meticulously until it is ready to be made public. He believes in the truth and in searching for it, not only with his head but also with his heart, though he never allows his heart to confuse his head. He is searching for it, and not talking about searching. And he goes on searching for it, when hope burns low, believing that "a just cause is worth fighting for, even though it is hopeless." His disciple, Charles Péguy, has pro-

claimed, like Joan of Arc before him: "In such matters it is not principally a question of conquering. It is a question of fighting well: To fight well is our part. Victory is not within our province. The issue rests with God." " But for that knowledge and the willingness to accept it, the understanding is not enough; love is necessary, "a pure emotion," the motive force of the will.

Now it happens that contemplation of this degree of intensity is also the highest form of action. It is, in fact, that intellectual form of action which is action *par excellence*; in principle all other forms are the same. Without it spiritual execution would itself lack guidance. And only an occasion needs to be supplied for it to blossom out into political, social, and universal forms of action. During the War, and after it, this great intellectual proved to be the best of diplomats and the most energetic, as well as the most far-seeing of our men of action.

On March 14, 1915, he wrote to me: "Just now I find it very hard to concentrate my attention on anything but the War. It is continually in my mind. And yet I have absolute faith in the ultimate issue. Terrible sacrifices will have been demanded, but its result will be the rejuvenation and advancement of France, and the moral regeneration of Europe." Bergson was not obliged, like so many others, to free himself from the domination of German ideas, for he had never been subject to their influence, nor felt in any way drawn to them. From the outset he saw clearly because his vision had always been clear."

"*Œuvres complètes de Charles Péguy*, Vol. IX, p. 141.

"*Vide La signification de la guerre* (1915).

In positive terms he affirmed his unassailable confidence in our cause and in our country. He brought out clearly the true significance of the struggle and denounced German imperialism, the conflict of inferior and infernal powers with the great task of spiritualizing humanity, and he contrasted "the force which wears itself out," i.e. the mechanism which is incarnate in the *peuple-dieu*, with "the force which does not wear itself out," i.e. moral force, that which is spiritual, chained to the ideal of liberty and justice, represented by France." He did more. He became the apostle of the French ideal abroad, in Spain, in the United States, among nations who, as he said of generous and chivalrous Spain, are "on the same moral plane and at the same moral altitude" as ourselves. He paid two visits to America, at the two worst periods of the War, from January to May, 1917, and again from May to September, 1918. He was in no uncertain state of mind upon the subject of the War; the existence of that most precious thing, French culture, he seemed to think menaced, and considered it his duty to go and speak to his friends about it. None knew better than they how to appreciate the competence of such an embassy, founded as it was upon *intellectual*

"In his speech of Jan. 26, 1918, Doumic told of an interview which Edmond Rostand had had with Bergson very shortly before the War: "In the collective life of a nation there is always one factor that is unknown; we knew the diabolical skill with which our enemies had worked to propagate in our midst the doctrines which underrate individuals and disarm nations. What would happen in an hour of crisis? Then, as he related, your eyes flashed, and it seemed as if your gaze were fastened upon a vision already more than half actual. 'France need not dread that hour,' were your words; 'at the first call to arms, all phantoms will vanish, swept away by a great wave of patriotism.'"

sympathy and upon *truth*. The whole secret of such diplomacy consists in knowing how to place oneself at the other's point of view, and thus obtain a true vision—a process which is absolutely the Bergsonian method applied to practical affairs.

When the War ended Bergson did good work to bring about peace, the true peace, which means the resumption and continuance of the march forward, "always in the same direction and always higher to the just and true." Upon the creation of the commission for intellectual coöperation in the League of Nations, he was appointed its president. In the delicate tasks which this office demanded of him he showed himself an admirable diplomat and an effective administrator. He had special skill in the ultimate disposal of useless projects, without giving offense, and in bringing the right projects to their true end, in all senses of the word. But his official duties as president had tumbled like a boulder into a life so full that it contained scarce resting place for a pin. It exhausted both his strength and his time. . . .

Now these days are of the past, the work is unfinished, and we see around us that the fruit has not fulfilled the promise of the flower. Is this a reason for despair? No. There is a force upon which time has no effect, and the men, like the nations, possessing it, triumph over time.

Strangely and mysteriously, during the devastating fury of the Great War, did humanity rise to the ideal. Of this period Bergson has retained recollections which still excite and exalt him. At that time everything was transported to a higher plane and placed on a footing of heroism which raised the souls

of men above themselves. There is nothing sadder in the way of contrasts than the degradation of mind and the deterioration of character which have followed the great crisis. Doctrines believed to be dead have drawn men of understanding afresh toward an alliance with mechanism and materialism. Everything has fallen to a lower level. Possibly this is but a passing reaction, expressive of the rise and fall to which nature is subject. Whatever it may be, whoever is inclined to complain of the present and despair of the future, has but to carry his thoughts back to the anguished days of the War to realize and savor his good fortune, and to recover his faith, too, in the destiny of France. She has overcome the diabolical assault of barbarism upon her; in due course she will prove able to overcome herself, show herself faithful to her traditions, and regain the profound longing of soul "that goes straight onward to that which is general and by that path to that which is generous."

Charles Péguy said to Bergson, not long before the War, "The essence of the French soul is the spirit of religion." If we are to understand by that devotion, sacrifice, and disinterested love paid to a high ideal, he was not mistaken. And all these virtues, when consecrated to truth, which is also one, endow him who possesses them with the power of realizing himself fully by coinciding with this ideal, which is a vital principle of life and of its renewal, and therefore can never grow old.

CHAPTER III

THE METHOD

INTUITION AND THE PHILOSOPHICAL MIND

*We gauge the significance of a doctrine of philosophy by the variety of ideas which it unfolds, and the simplicity of the principle it summarizes.*¹—HENRI BERGSON.

WE have studied the man, in order the better to understand the doctrine. But as that study has acquainted us with the starting point, and the orientation of the doctrine rather than with its actual substance and its goal, the question may now arise: Has the man nothing more to disclose about his work? Before taking final leave of him, can you not inform us if he himself can already anticipate where his thought is coming out, or if you have any presentiment in the matter? To such questions it is easy to give an answer. Bergson does not know, nor *a fortiori* do I, the terminal point to which his research may lead; and how can he know it, since he never proposed to himself to set out for a certain destination beforehand? If a presentiment in regard to it is in any way obtainable, that way will be for our minds to fall into step with his work of research and patiently follow through all its stages. Here, as elsewhere so often, we must learn to wait for

¹ From the preface written by Henri Bergson for G. Tarde's *Extracts*, published in the series *Les grands philosophes* (Paris, Michaud, 1909).

time to speak. Truth will not allow her hand to be forced, and the desire to snatch her secret from her before she is ready to reveal it shows a lack of faith in her, a lack of love for her as she would be loved. This superior quality of patience, which is the hallmark of faith in the truth, is precisely the quality which confers an incomparable value upon the progressive quality of Bergsonian thought, the deep force of conviction, the effects of radiancy and liberation which emanate from it. Let us follow his example and, like him, learn to wait upon truth to reveal her secret to us.

It is to be doubted, moreover, whether the whole of truth will ever be revealed. An author may know pretty nearly what he *has said*,² but it is quite certain, however paradoxical it may sound, that he never knows very well all that his mind has been struggling to say, or, to put it more precisely, all that his work means to convey, all its significance, whither and how far it points. The profoundest elements in any product of the mind are the inklings of reality which, by the agency of a man, have found their way to the light and taken shape. Now the man has not come face to face with reality; he has sought to do so, and has told of his search and given us such images of it as he has been able to seize, but he cannot give the reality itself in its original simplicity and purity. Our intuition, like our most

² I say "pretty nearly," because, "to be able to understand the new we are obliged to express it in terms of the old," as Bergson wrote ("*L'intuition philosophique*" in the *Revue de Métaphysique et de Morale*, 1911, p. 812). Now the old could not perfectly express the new; the words betray the thought at the time they interpret it, at any rate when the thought is new and not reduced to mere verbalism.

profound intention, always remains obscure to ourselves. Nevertheless, if we live and draw life from this intuition, if it lasts and lives on in us, it gradually unfolds its riches to us; it manifests itself in a variety of aspects which are all inadequate witnesses, no doubt, but possibly ever bring us nearer to the invisible center whence the light issues and the impulse proceeds. More than any of these aspects can, the law of their continuous unfolding reveals to us something of that "movement of thought" which, more thoroughly and more precisely even than "the thing thought," constitutes the direction and the significance of the process itself of thought. In that way, mounting "toward the point where all that was given in *extension* in the doctrine is drawn in again and reinfolded, we can depict the emergence in ourselves from this innermost otherwise inaccessible center of force, of the impulse which produces the impetus, that is, intuition itself." *

It is toward this central point that we must now endeavor to rise. To that end, we must leave far behind and either side of us the confused clamor of systems and doctrines and disputes, and forget for the moment the milieu and the period in which the man lived. Indeed, as a general rule, if we date the birth of a man some centuries earlier, his formulas would have been quite different; perhaps he might have said nothing just as he has said it, and then again he might have said the same thing because he would have meant the same thing. Although a whirlwind does not "become visible to our eyes save by that which it has gathered up on its path, it is

* *Ibid.*, p. 820.

none the less true that it might just as well have gathered up other fragments of dust and yet it would have been the same whirlwind." * But there is more to be said. To rise to this point, to attain this summit, or, if it be inaccessible, to approach it as nearly as we can, we must not only pass the bounds of the milieu in which the man has lived, we must go beyond the man; for the moment we must lose sight of what he was, and try to grasp the idea of which he is the depository, deputed to interpret and to serve it, an idea which infinitely exceeds him in scope, just as he infinitely surpasses his milieu in significance. For the present all that it concerns us to know and retain of what has just been said is precisely this: that this doctrine is not, like so many others, a mere reflection of its surroundings, but was set free in some way from the conditions of time and place upon which it seemed to depend, because it is regulated by the truth, and not the occasion, also because this man does not try to piece truth together, but is content to serve her, which is the only way to succeed in knowing her.

The substance of duration is eternity; it is non-temporal, but rich in all that duration develops in time, an eternity characterized by movement and life, not by repose and death. The substance of a soul is the invisible reality to which it adheres, having had, at one point, not a mere vision but actual contact with it, from which an impulse has been received, which it thereupon endeavors, though without success, to express in concepts and images that can never be more than symbols. All this leads us to

* *Ibid.*, p. 813.

repeat that the essential point, in all things, is *the truth*. It is to the truth that we must first adhere.

Now at what point has Bergson come into contact with the truth? And how was this contact made? This is what we must seek to discern in order to understand and—a still more important matter—to endeavor to follow in his steps and arrive ourselves at the point of truth which he has reached. Speech does not proceed from words to thought, but from thought to words. Comprehension, likewise, means proceeding from the thought, conjectured or recognized afresh, to the words which interpret it; from intuition to systematization, from within to without, and not the reverse.

A contemporary English thinker ranks Bergson among the world-discoverers who have renewed human thought and made a new advance possible through the introduction of a new concept, or rather, as we would say, of a new point of view and a fresh way of thinking. After its discovery, this novelty, he says, appears quite simple and self-evident, and a source of astonishment that it was not discovered sooner. Nevertheless, the matter stands thus: it is new because, although it is as old as the world, it was then noticed for the first time. It is like the new vision which an artist, possessed of genius, gives us of the familiar landscapes upon which our eyes rest with indifference every day, or the fresh significance which is suddenly revealed to us by a scientist and a genius in ordinary phenomena repeated before us daily.

* H. Wildon Carr, *The Scientific Approach to Philosophy*, Chap. V, pp. 75, 93.

The new concept, or rather, the new method of view which we owe to Bergson, is *duration*. Bergson expressly stated this in a letter to Höfding: "In my opinion, any résumé of my views would distort them in their ensemble and, by that distortion, expose them to a host of objections, if its author did not at once place himself at, and continually return to, that which I consider the very central point of the doctrine—the intuition of duration. The representation of a multiplicity of reciprocal penetration, altogether different from numerical multiplicity—the representation of a duration that is heterogeneous, qualitative, creative—is the point whence I set out and to which I constantly return. It demands a great mental effort, the rupture of many restraining limits, something resembling a fresh method of thinking (for the immediate is far from being that which is the easiest to perceive); but, once a man has reached this representation and is acquainted with it in its *simple* form (which must not be confounded with its conceptual representation), he feels constrained to change his point of view about reality; he sees that the very greatest difficulties have arisen through the philosophers' having always put time and space on the same plane, and most of these difficulties will be lessened or else vanish." *

This is what Bergson tells us, and his testimony is in no way equivocal. Does he exhaust the content of his intuition? His very philosophy, in the absence of external testimony, would entitle us to say No. It is quite allowable to think that the conception of duration was to him the "mediatory

* Quoted in *La philosophie de Bergson*, by Harald Höfding (Paris, Alcan, 1916), p. 160.

image" which provided his mind and may, to a certain extent, also provide ours with a creative intuition, because it issues from it, though without exhausting it. Frequently of greater interest than the formula or the image itself by which his intuition is revealed to any thinker is the road by which he has arrived at it, and that which by reflection upon it he has extracted from it. A concept is usually more fertile by reason of that which leads to it, and that to which it leads, than by its own content. Undoubtedly we shall be able to get into the closest touch with the original intuition that is the soul of the doctrine by studying this movement in both these aspects.

Let us consider Descartes' great intuition, from which his whole system is derived, as revealed to him in his three dreams of November 10-11, 1619.¹ What do we find? First of all there is the obvious significance which these dreams hold for a mind that was eager for certainty, and especially the idea that the intuition of the poet is vastly superior to the reasoning of the philosopher when "the seeds of wisdom to be found in the minds of all men, like sparks in flints, are to be brought forth." Then there is Descartes' meditation upon the way in which these dreams have been produced which "opened up to him the treasures of all sciences," i.e. using corporeal objects as symbols of spiritual things, and images of sense to represent the concepts of pure intelligence. Transposed to the mathematical plane, these provided Descartes with the creative idea of analytical geometry. Then, reflect-

¹ See the author's *Descartes*, pp. 42-47, 153.

ing upon this same reflection and upon its stupendous "issue," to use Baillet's expression—upon the deep-seated reason for this concord between two heterogeneous worlds—Descartes arrives at the conviction that it is the Spirit of Truth that guarantees the verity of his intuition, both in itself and in its application to things. And he becomes apprised of the direct connection between the intuition of the ego and the knowledge of God which it enables him to infer as a conclusion, but which it also establishes. There, in that wonderful "circle," I may say that we are in touch with the very soul of the doctrine. It makes one think of a bulb whose leaves, like enclosing sheathes, fit one within the other around the central bud whence the stalk will shoot up into the air.

Let us try to detect and similarly to remove the successive enfoldings by which the pure Bergsonian intuition is surrounded, without claiming, however, to penetrate clear within to itself, or still less to compress it within a formula.

Zeno the Eleatic, as is well known, twenty-five centuries ago proved, by reasoning which was not refuted, that there is no such thing as motion, because a body in motion must arrive at the middle of its course before it can attain its goal, and when it has reached the first middle, half the remaining distance will constitute a second middle, and so on, to infinity; that Achilles will never catch up with the tortoise, because when he arrives at the point it has left, it has advanced, and will keep this up, to infinity, etc. Now Bergson, who believes, as common sense does, in the reality of motion,

puts the question: " Whence arises the fallacy of the Eleatic philosophers and of all who have vainly endeavored, after adopting their initial position, or their method of propounding the problem, to refute their reasoning? And he replies, for this is what he one day perceived, and it constitutes his original intuition: Their fallacy arises out of their attempt to reduce motion to the path traversed, to subdivide and put together again movement itself like the homogeneous space which subtends it, without realizing that we cannot make movement out of immobilities, or time out of space. They are not aware that although the space traversed, which is a matter of extension or a quantity, is indeed divisible, we cannot divide movement, which is, an intensive act or a quality, and more definitely still, a *duration* or a *progress*. Either they do not perceive this, or else, after having perceived it, they have forgotten it; they confuse movement with the space traveled in supposing that movement from one point to another is divisible to infinity, like the intervals which separate these points. Accordingly, whatever one may do, the intervals will never be crossed, and Achilles will never catch up with the tortoise. And yet the arrow wings its way and reaches its mark; Achilles runs, and he overtakes the tortoise he is pursuing. This is what common sense tells us; though directly contrary to the dialectician's conclusion, it holds its own against him. Why?

A study of the equations of mechanics or of

¹ *Essai sur les données immédiates de la conscience*, p. 85 et seq. Bergson has come back to this point in *Matter and Memory*, pp. 250-53, and in *Creative Evolution*, pp. 308-11.

astronomy will lead to the discovery that they confine themselves to calculating simultaneities, without taking the intervening moments into account. This is proved by the fact that "if all the motions of the universe took place twice or thrice as quickly, there would be nothing to alter either in our formulas, or in the figures that are to be found in them." * Only the observing consciousness would capture the "qualitative" impression of the change of speed, living as it would through shorter time, "but the change would not make itself felt outside consciousness, since the same number of simultaneities would go on taking place in space." * Such is the uniform method of science. It calculates duration in terms of space, by means of movement, because science insists on measuring, and space is the only thing which is actually measurable. This amounts to saying that *science reduces movement to something other than itself, and substitutes, for real duration, the stuff movement is made of, a symbolic image derived from extension in space.* Thus it measures movement by bringing it to a standstill, as it analyzes life by killing it. But consciousness, at any rate intrinsic consciousness, from which the superficial portion has been detached, the consciousness which lives and does not measure, feels and perceives duration directly, powerless as it is to measure it, and also not even making the attempt. It perceives it as a quality and no longer conceives it as a quantity; consciousness grasps it immediately, in its career, undivided and indivisible, like that of a musical phrase of which the heterogeneous moments overlap one another, persisting

* *Time and Free Will*, p. 116.

and inter-permeating to the point of forming but one whole. It knows that the movement of the arrow is "a single and unique bound," "as simple, as indecomposable, in so far as it is movement, as the tension of the bow that shoots it";¹⁰ it knows, and "the truth is that each of Achilles' steps is a simple, indivisible act, and that after a given number of these acts, Achilles will have passed the tortoise."¹¹ What does this mean? *The observing consciousness, differing in this respect from science, captures movement in itself, in its inner reality, concrete and qualitative, by setting aside the spatial symbols interposed between reality and ourselves.*

Such is Bergson's original intuition. Such, at least, is the original form in which that intuition presented itself to his mind. Whoever could comprehend this thoroughly, would comprehend all of Bergson. Even so, this intuition is not all, or to put it differently, here is *why*, perhaps, it is not all. The discovery of the true nature of duration, as a matter of fact, has led Bergson to another discovery very closely bound up with it, which, in my opinion, surpasses it, if not in force and in interest, at any rate in depth and in universality, and which undoubtedly prepares the way for other discoveries, for it is the characteristic of intuition to be inexhaustible. Let us reflect upon this duration, let us try to fathom its content, and first of all try to secure a closer grip of the way in which to get at it, and the way in which it is missed. Thus we

¹⁰ *Creative Evolution*, pp. 308-11.

¹¹ *Time and Free Will*, p. 113.

shall readily perceive the fundamental contrast between the two ways of knowing things.

Why is it that the dialectician denies movement its essential characteristic? Because he regards it from without. How is it that common sense perceives fairly? Because it apprehends it from within. "The line traversed by the moving body lends itself to any kind of division, because it has no internal organization. But all movement is articulated inwardly."¹¹ Science is attuned with the first; consciousness, with the second. *Science, viewing from without, sees only the exterior of things; consciousness, apprehending from within, sees also the interior, the very soul.* And here contact is established with new and unfathomable depths. Let us try, not to measure them, for that is impossible, but at any rate to show their significance.

"Philosophers," wrote Bergson in a well-known article, "in spite of their apparent divergencies, agree in distinguishing two profoundly different ways of knowing a thing. The first implies that we move round the object; the second that we enter into it. The first depends upon the point of view at which we are placed and on the symbols by which we express ourselves. The second neither depends on a point of view nor relies on any symbol. The first kind of knowledge may be said to stop at the *relative*; the second, in those cases where it is possible, to attain the *absolute*."¹²

Elsewhere, in a valuable note, Bergson has defined more precisely what he understands by this. "It

¹¹ *Creative Evolution*, pp. 310-11.

¹² *Introduction to Metaphysics*, essay first published in the *Revue de Métaphysique et de Morale*, Jan., 1903, and translated by T. E. Hulme (Putnam, 1912), p. 1.

seems to me," he says, "that for everybody a knowledge which grasps an object *from within*, which perceives it as a man would perceive himself if his apperception and his existence were but one and the same thing, is an absolute knowledge, a knowledge of something absolute. It is undoubtedly not the knowledge of the *whole* of the reality, but a relative knowledge is one thing, and a limited knowledge another. The first alters the nature of the object; the second leaves the object intact, but grasps a part of it only, I maintain, and I have done what I can to prove it, that our knowledge of reality is limited, but not relative, and also that the limits of it may be moved further back indefinitely." ¹⁴

The absolute that we may claim to grasp in this way is not the Absolute in itself, the Unconditional in its totality, which clearly surpasses all human intuition as much as does infinity, but rather it is permissible to say, an absolute *secundum quid*; ¹⁵ and the knowledge gained of it, according to this distinction, which has a wide range, may indeed be *limited*; but it is, however, not *relative*; it too is in some sense absolute, because it is attuned with its object and even coincides with it.

The first example which presents itself to the mind, the first which Bergson himself gives us, is precisely the example of motion, which is now to be envisaged in a more fundamental way, but yet in accord with his original intuition which it completes and perfects.

¹⁴ *Vocabulaire philosophique* (A. Lalande), "*Inconnaissable*."

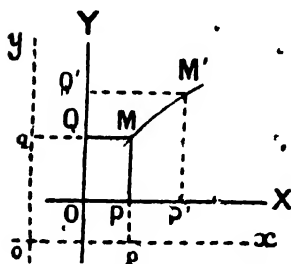
¹⁵ An expression used by Saint Thomas Aquinas in his *Sum. Theol.*, 1^a p., q. 7, a. 2, when speaking of the infinite.

"Consider," he says, "the movement of an object in space. My perception of the motion will vary with the point of view, moving or stationary, from which I observe it. My expression of it will vary with the system of axes, or the points of reference, to which I relate it, that is, with the symbols by which I translate it. For this double reason I call such motion *relative*: in the one case, as in the other, I am placed outside the object itself. But when I speak of an *absolute* movement, I am attributing to the moving object an interior and, so to speak, states of mind; I also imply that I am in sympathy with those states, and that I insert myself in them by an effort of imagination. Then, according as the object is moving or stationary, according as it adopts one movement or another, what I experience will vary. And what I experience will depend neither on the point of view I may take up in regard to the object, since I am inside the object itself, nor on the symbols by which I may translate the motion, since I have rejected all translations in order to possess the original. In short, I shall no longer grasp the movement from without, remaining where I am, but from where it is, from within, as it is in itself. I shall possess an absolute."¹⁶

I make a gesture which is as simple and indivisible as the effort which launches it and as the state of consciousness which the effort expresses. It is in the making, it is *made*, it has joined the past. The scientist then sets to work upon the trace made throughout the length of its course by the completed gesture, and *thus reducing movement to*

¹⁶ *Introduction to Metaphysics*, p. 2. Cf. *Matter and Memory*, pp. 230-55, and *Creative Evolution*, pp. 308-14.

something other than itself, he takes the points of the trajectory for integral parts of the movement, whereas, as in the case of all "becoming," they are mere mental aspects, "possible stoppages," imagined by us from outside in the whole constituted by an unbroken progress.¹⁷ But with these immobilities I



In this figure $Pp = Qq'$; $Qq = Pp'$. It must be remembered that the scientist is considering the positions of M and M' only, disregarding the interval

should never rediscover, I shall never make, the gesture again.

Let us make this point clearer. The mathematician defines the movement of a body in motion by means of the variation of its distance to its axes; of the movement itself, therefore, he only becomes acquainted with changes in length, and as these changes may just as

well be explained by the displacement of the point with regard to the axis, he attributes indifferently to the same point repose or motion.¹⁸

Is it the point M which has become M', or is it the axes OX and OY which have been displaced to go to ox and oy? To the scientist it is all one, for in both cases he is content to note the distances. Now the distances $M'P'$, $M'Q'$ and the distances Mp , Mq being equal, the scientist, to account for the variation, can choose one of the two methods of viewing them, and the choice of

¹⁷ *An Introduction to Metaphysics*, p. 50. Cf. *Creative Evolution*, p. 309.

¹⁸ *Matter and Memory*, pp. 254-56.

one rather than the other has "no meaning"¹⁰ for him unless the one permits him to express the law of the phenomenon in more simple terms and a more convenient form. For science, then, only the relations exist; all movement is relative, or, as Descartes had already come to expressing it,¹¹ movement is "reciprocal," which amounts to saying "*that it is not within the scope of our mathematical symbols to express the fact that it is the moving body which is in motion rather than the axes or the points to which it is referred.*" . . . But that real motion is there no one can seriously deny. . . . In his controversy with Descartes, Henry More¹² makes jesting allusion to this last point: 'When I am quietly seated, and another, going a thousand paces away, is flushed with fatigue, it is certainly he who moves and I who am at rest.'"¹³

In other words, *I am assured of the reality of movement both (a) when I move, that is, when I am conscious of producing a movement after having willed to produce it, and therefore when I perceive it from within and identify myself with it; and (b) when, without producing it myself and being thus identified with it, I place myself in some way within the movement, to sympathize with it.* Then, and

¹⁰ It was thus that Poincaré was able to say: "The statement: *The earth revolves*, has no meaning. . . . Or, rather, the two propositions: *The earth revolves*, and *It is much more convenient to suppose that the earth revolves*, have one and the same significance; there is no more in the one than in the other." Vide *La science et l'hypothèse*, p. 141, and the explanation of it given by Poincaré in *La valeur de la science*, p. 271.

¹¹ *Principia philosophia*, II. 29.

¹² *Scripta philosophica* (1679), Vol. II, p. 248 (quoted by Bergson in *Matter and Memory*, p. 255).

¹³ *Matter and Memory*, pp. 255-56.

then only, it is an "absolute," and the cognition I have of it is "an absolute knowledge."

Examples abound and it may be well to mention a few of them at least, so that all the features which are accidental, or peculiar to any example chosen, shall be eliminated from the picture, and all its fundamental and essential features be brought out into relief, for the characteristic above all that belongs to this theory of "interiority" is that of applicability to everything.

Let us imagine that ** I, a Frenchman, am desirous of learning how to pronounce English. I may accomplish it in two ways. I may learn it as a function of the French pronunciation already known to me. Then I should try to find among the sounds of the French language equivalents to those English sounds, but never, however, should I be able to discover in my own tongue an articulation which *exactly* reproduces the image or cadence of the English sound. The final syllable of the word "father," for instance, is neither *eu* nor *a*, nor any of the French articulations. In such a case I should possess a relative knowledge of English pronunciation, because I should speak English like a Frenchman, and in relation to French, that is, to something other than English. But I can begin by speaking the language itself, as the English child does; I can grapple with it from within through its sentences, and thence descend to details, and my knowledge of English pronunciation then would be an absolute and simple one, and I should speak English like an Englishman.

** This example and the one which follows were given by Bergson in his lectures on the "Idea of Time" at the Collège de France, 1902-3.

Again, let us suppose that a fiction writer like Cervantes wants to describe to me a character whom he has imagined. To do so, he is obliged to compress this character into terms already familiar to me, and for this reason the fiction writer finds it necessary to set forth in a first, and then supplement in a second, *Don Quixote* adventures of his hero in which to display his characteristic features, and the gestures which interpret the man. But all these are but the signs by which to convey all this symbolically, and they station me outside the man. What would be necessary for me to have an absolute, inner, simple knowledge of the given character? It would be necessary for me to be able, from a central position, to reach the character himself in respects that are peculiar and individual to him alone, and for one moment to identify myself with him. Then, "as water from a spring, all the words, gestures, and actions of the man would appear to me naturally."²⁴ This is precisely the knowledge that Cervantes has of Don Quixote. He is inside his hero, because it is self-description he is giving, not what he has been, but what he might have been, in one of the multiple personalities potentially existent in him.

So again, when a true scientist, a creative scientist, not a reciter, but a maker of science who is a biological genius, for instance, endeavors to describe to others the functioning of the vital principle, he explains it through that which they already know, that is, through the interplay of material things; every new science in its beginnings proceeds in this way. But by his long experience in the handling of life this scientist has acquired an inside knowl-

²⁴ *Introduction to Metaphysics*, p. 3.

edge of his subject, the living being, and he perceives from within the *creative idea* embodied in it, "that which is essentially of and peculiarly belongs to the realm of life, and does not pertain either to chemistry or to physics or to anything else," and "which is developed and manifests itself by means of its capacity for functioning."²² He who studies life from its exterior, as a function of that which is already known, obtains but a relative knowledge of it, but that of the scientist is an absolute knowledge. The student of the exterior sees organs or functions or combinations of movements, or the juxtaposition of cells; his rival gets at life, and finds it something as infinitely simple as a gesture or an impulse. The first reduces it to something other than itself; the second apprehends it in itself.

We see then — and this characteristic feature applies to all the examples that might be cited — that *to know a thing absolutely is to know it from the inside, in itself, and as simple; to know it relatively is to know it from the outside, as a function of something else, as compound.*

But how can the same thing be pictured to appear both simple and compound? The reply to this fresh question will enable us to grasp the relation which exists between the terms "absolute," "infinite," and "perfect."

Coinciding with a person or a thing alone, as has already been said, can give us absolute knowledge of that person or thing. Now by "absolute" it is meant that "the absolute is perfect by being perfectly what it is," and that it is also infinite because being truly indivisible, the symbols, no matter

²² Claude Bernard, *Introduction à l'étude de la médecine expérimentale* (Delagrave), p. 147-48.

how multiplied, by which we express it, cannot exhaust it."

All the representations and images and translations into language of an object remain imperfect reproductions upon comparison with the original itself; there is the same difference between them and it, as between the knowledge gained of a person or of a town from a series of photographs and that possessed through actual acquaintance. Photographs of a town have actual value only for the one who is familiar with the original, and knows how to arrange them with regard to each other and interpret them in terms of the original. Any one acquainted with that town can reconstruct its appearance with the aid of these photographs *because he knows it*; but if he is a stranger to it he cannot utilize those partial and fragmentary views of it. It is the same with a poem. If I know the poem, and even more if I myself created it, I know it for that very reason, and I can reconstruct the words which express it, the letters that have entered into its composition. But if I did not know the poem, giving me the letters and the words would not be enough for me, to reconstruct it, and still less would these enable me to recapture its creative idea, or to create it." In short, I can very well proceed from the whole to the constituent elements, but the reverse of that process is not possible, for the whole is more intelligible than its fragmentary elements; to it they owe their existence, and it is from it that they have become detached by analysis.

In this sense, then, relative knowledge, knowledge by signs and symbols—like the knowledge acquired

** *Introduction to Metaphysics*, pp. 5-7.

** *Ibid.*, pp. 28-29.

through photographs or descriptions—is an imperfect, incomplete form of knowledge, which does not suffice for itself, because it is not the object, but an imitation or counterfeit presentment of it, an interpretation of it in symbolic terms, so arranged that it will imitate the object but will never coincide with it; only by being carried on to infinity can it perfect itself; without, however, even then perfectly coinciding. It is only by assuming that the indefinite succession of the points on the line, the fragmentary elements of distance, or the terms which represent it, are exhausted that the mathematician can imagine that *at the limit* thus reached the line will be completely traversed and Achilles will overtake the tortoise.” Similarly, it is by putting the character of his hero on display in an ever-increasing series of adventures that the novelist tries to give his reader an adequate idea of him. These adventures constitute a series of symbols, never exhausted whatever their number, which endeavor to reach the junction point with the simple whole without ever attaining this aim. They do give us, however, some idea of the infinite variety of the simple; for “that which lends itself at once to an indivisible apprehension and an inexhaustible enumeration is, by the very definition of the word, an infinite.” But true infinity, the infinite proper, can never be attained by any process of enumeration; a simple apprehension alone can convey it to us. It is because the first step in this process of numeration is always only partially successful, and its successors keep on being so, that it

“To show how artificial this motion of a limit is, it is enough to note that Achilles does not overtake the tortoise at the limit, but that he overlaps it after a certain number of leaps.

“*Introduction to Metaphysics*, p. 70.

has to go on to infinity. "But intuition, wherever it be possible, is a simple act." The arrow flies; Achilles runs; I perceive the town on opening my eyes; Cervantes creates Don Quixote and sees him at a single stroke. Here again is an absolute of some kind, known absolutely.

"Hence it follows," says Bergson, "that an absolute could only be given in an *intuition*, whilst everything else falls within the province of *analysis*. By intuition is meant the kind of *intellectual sympathy* by which one places oneself within an object in order to coincide with what is unique in it and consequently inexpressible. Analysis, on the contrary, is the operation which reduces the object to elements already known, that is, to elements common both to it and to other objects. To analyze, therefore, is to express a thing as a function of something other than itself." ⁶⁰

It will be necessary to return and dwell longer upon intuition, taking into consideration its nature and its application, its mechanism, its origins, and its relations to the intelligence. Let it merely be noted here that *intuition*, as Bergson conceives it, which corresponds to what others call *intellectus* or *intellect*, is indeed the capacity of "viewing the thing from within" (*intueri*), or "reading inside it" (*intelligere*). But once again let us avoid relapsing into the use of spatial images, for these would distort what is meant here; the "interiority" which is in question here is a spiritual or moral and not a material inwardness. It is possible to visit a town with a *Baedeker* in one's hand and not really get to know it. True intuition, moreover, is not content merely to penetrate to the interior of a thing; it

⁶⁰ *Ibid.*, p. 7.

makes an effort at coinciding with it, if that be possible. Now to be able to do this, it is necessary to get out of oneself, at the same time, however, not ceasing to be oneself; and this again can only be accomplished spiritually, not spatially. For this reason all true knowledge is knowledge acquired by affinity, as in the case of sympathy or friendship.

"This being granted," continues Bergson, "it is easy to see that the ordinary function of positive science is analysis. Positive science works, then, above all, with symbols."¹ And that point of view is after all a perfectly legitimate one, as will appear later, especially in the domain of numerical application and for purposes of measurement. But it is so on two conditions: (1) that the thing itself that is being measured is carefully separated, and not confused with the image which represents it in our minds—the original kept distinguished from symbol; and (2) that we abstain from limiting human knowledge to this knowledge which is symbolical and by definition relative. For side by side with and beyond this is another science, a science which claims to dispense with symbols, and when confronted by a reality, aims at possessing it absolutely, at taking its position within it, at obtaining an intuition of it, in short, at the transfer to us of the thing itself of which only partial and fragmentary aspects can be shown by positive sciences. This science is *metaphysics*.

Are its claims well founded? Is metaphysics capable of becoming positive and progressive and as deserving of these titles as the analytical sciences, although by the use of different methods? Has it capacity to compass that which analysis does not attain, something of the reality itself and of the

¹ *Ibid.*, p. 8.

original syntheses which the reality presents to us? This is what we shall have to be on the lookout for and especially have to try to find out.

But "there is one reality at least which we all seize from within, by intuition and not by simple analysis. It is our own personality in its flowing through time, our self which endures. We may sympathize intellectually with nothing else, but we certainly sympathize with our own selves." Now how do we get acquainted with ourselves? How does the ego disclose itself to consciousness? It is not by means of *images*, for through them an inner life could not be expressed which is marked by "variety of qualities, continuity of progress and unity of direction." It is still less possible of expression by means of *concepts*, by the use of abstract and general ideas which, cramped by the conditions applying to sensuous and imaginative thought, have the further disadvantage of severing connection with the concrete, with which the image preserved contact, and retaining of objects only the ordinary and *general* aspect presented by them, when the attention is fixed upon them with a view to *action*. Now therein resides an illusion, and therein also a danger. Abstract concepts are useful, legitimate, almost indispensable even (this cannot be repeated too often) for the scientific study of an object in its relations with all other objects; useful and consequently indispensable to metaphysics, which cannot dispense with other sciences. Nevertheless they are unable to take the place of the metaphysical intuition of the object, for instance, of the ego as far as that which is essential and peculiar to it is concerned. It is impossible to get a faithful representation of the duration constitutive of our inner life and our intimate being

by arranging and combining, in any way whatever, the concepts of unity and multiplicity; it is impossible to reproduce a whole by merely bringing the "parts" into juxtaposition, just as it is impossible for our intelligence to recompose *a priori* from its abstract elements concrete and real movement which is a fact of direct experience immediately appropriated by intuition."²² There is the illusion and the danger also, referred to above. These symbols, which science has adopted from motives of convenience or economy, are perpetually tending to take the place, in our minds, of the object they symbolize. The physicist therefore ought not to lose sight of their concrete significance. Their use demands of us the minimum effort of adaptation and comprehension; when a new object is presented they allow it to be classified immediately in a genus already known and, as Newman has already said, to be labeled with a ticket which does not suggest the existence, real and individual so designated, but masks, maroons, and transforms it into an abstraction. "It is man made into a definition."²³ And since it furthers mental sloth, this poor quality

²² Pp. 17-11. Cf. *Revue de Métaphysique et de Morale*, 1908, p. 33.

²³ *The Grammar of Assent*, I, iii, p. 31. Newman perceived acutely, and, like Bergson, he indicated clearly the difference in the two methods of thought, one of which grasps objects from within, whilst the other "views them from without"; the real assent, the assent to the things themselves, and the notional assent, the assent to their concepts. Pascal, too, in the *Discours sur les passions de l'amour*, had already said of the "*esprit de finesse*": "From the eyes it goes to the heart, and through the external movement it knows that which is passing within." It must, however, be understood that we do not in any way mean to disregard what there is that is peculiar to, and original in, the Bergsonian point of view.

intellectualism has pervaded all circles, carrying its menace of death to the intellect. Let us trace its effects.

First of all it has ruptured the unity of the human intellect, as it ruptures the concrete unity of the object. The truth is that every concept, as the expression of an external point of view of a thing, presents only a certain aspect of it and consequently deforms it. Since, moreover, the human intellect generalizes at the same time as it abstracts, it tends to piece these concepts together, but always from its own point of view, and thus tends to reclaim and reduce them to itself. This extension to the whole of the universe of concepts which are partial by definition, and the confusing in this way of the rôle of analysis with that of intuition, gives birth to a multitude of "systems" and "schools, each of which carries on with the others a game that will never end." **

Let us make this point clear. Analysis, wherever it is practiced side by side with intuition—as in psychology, for instance—substitutes for the object (in this case the ego) a series of elements (which here are psychical states). "But are these *elements* really parts? That is the whole question." ** And the answer to the question thus posed is not a matter of doubt. The mistake made by all those who have tried to reconstruct a whole from its elements, for instance, to put personality together again from the psychical states, or movement from the positions taken by the moving body, has been that of mistaking the elements yielded by analysis for parts,

** *Ibid.*, p. 21.

** *Ibid.*, p. 24.

the product of an actual division into fragments, or, if you will, taking partial expressions and notations for real component parts, fragments of the symbol for fragments of the original, thus confusing the point of view of analysis with that of intuition, signs with the realities to which they refer, science with metaphysics. Both empiricists and rationalists fall victims to this same delusion whether they confine themselves to psychical states alone or supply a kind of thread also for the purpose of connecting them. In both cases psychical states are regarded as *fragments* of the ego when they are really only *expressions* of it, because each psychical state, from the mere fact that it pertains to a person, is a reflection and expression of the whole personality. The so-called *empiricism* of Taine is here at one with the most transcendental theories of certain German pantheists, since they all "reason about the *elements* of a translation as if they were *parts* of the original." And all of them run aground because they overlook reality in its origin and essence, and grasp but its shadows.

But "true empiricism," which is also "true metaphysics," proposes "to get as close to the original as possible, and by a kind of *intellectual auscultation* to feel the throbbings of its soul." Instead of providing the object with a ready-made garb, a stock-size garment, it works to measure only, and thus for every fresh object studied it is obliged to make "an absolutely fresh effort," and undertake to find "a unique intuition" which expresses it, and renders all the concepts of it which may be given consistent, because it dominates them all."

** *Introduction to Metaphysics*, pp. 36-38.

"Concepts generally go together in couples, and represent two contraries. There is hardly any concrete reality which cannot be observed from two opposing standpoints, which cannot consequently be subsumed under two antagonistic concepts. Hence a thesis and an antithesis which we endeavor in vain to reconcile logically, for the very simple reason that it is impossible, with concepts and observations taken from outside points of view, to make a thing." ³⁷ This, however, is the habitual way in which the intellect sets to work, and accounts for its breakdown. Is it undervaluing the intellect to say so? Quite the contrary. The ascertaining of this twofold situation alone permits the restoration to the intellect of its correct rôle and its proper value, in short, its true greatness. Intellectualist doctrines, from the deadlock of the antinomies in which speculative thought naturally ends, and the impossibility of resolving it which confronts them, ought to infer that the ineffectiveness of the understanding is final; they inject a contradiction into the very heart of the object and of the method. Because it disregards its limits, the intellect runs the risk of compromising its validity, and by its inordinate pride falls into an incurable skepticism, which stands between it and its ever attaining the absolute. "On the contrary, if we admit that reason has not uttered her last word, that she has other resources in reserve, we shall strive to re-ascend the incline of nature, that is, of action"; ³⁸ we shall

³⁷ *Ibid.*, pp. 39-40.

³⁸ This sentence, uttered by Bergson at one of his lectures at the Collège de France upon "The Idea of Time," Dec. 19, 1902, is very interesting, notably for the fact that the word "reason" is used, which is very rare with Bergson.

make an effort to revive, behind our faculty for conceiving, our faculty for perceiving, expanded and enlarged,"⁸⁰ in order to find again, behind the antagonistic and complementary concepts, the intuition that sustains them; behind the signs of the object, the original itself that the intuition perceives. And we shall pass naturally from this point to the two contrary concepts, the thesis and the antithesis, and then grasp at the same time both how they oppose each other and how they are to be reconciled."⁸¹

It is true that this assumes "a reversal of the ordinary work of the intellect," because our intellect, oriented to action, is fashioned to throw light upon our courses of action. It is accustomed to handle and label and measure matter, to give us static, fragmentary, computable, and quantitative views of it, such as our dealings with things demand. "Thinking usually consists in passing from concepts to things, and not from things to concepts." But this process must be reversed, and that is the rôle of philosophy. *Philosophizing consists in reversing the habitual direction of our working thought; it*

⁸⁰ First lecture at Oxford on "*Perception du changement*."

⁸¹ This method of reconciling theses apparently contradictory, by fathoming their inmost depths, is essential to Bergsonian doctrine, as J. Segond, in his book, *L'intuition bergsonienne* (Paris, Alcan, 1912), has very clearly brought out. Thus, for instance, is solved the conflict between realism and idealism, the common postulate of which is the admission that perception has a wholly speculative interest (*Matter and Memory*, pp. 17, 20, 52, 73-75), or the conflict between radical mechanism and radical finalism, both of which assume that everything is given (*Creative Evolution*, pp. 37-41, 44-46). Intuition resolves them into a higher unity, which puts on its own plane each of the realities which these theses had represented in a distorted form.

proceeds from reality to concepts and from intuition to analysis, setting out from a reality which is durable, temporal rather than spatial, truly indivisible, incomputable, and qualitative, and then coming down again to the symbols which but imperfectly and relatively express, without ever exhausting this reality. What is quantity, for instance, if it be not "quality in a nascent state"? ⁴¹

If this is what philosophizing means, metaphysics, which is philosophy itself, can only be "a laborious and even painful effort to remount the natural slope of the work of thought." To philosophize will not mean a passive following of the thread of duration, or of watching oneself merely live, "as a sleepy shepherd watches the water flow." "This would be," says Bergson, "to misconceive the singular nature of duration, and at the same time the essentially active, I might almost say violent, character of metaphysical intuition." ⁴²

Why is this focusing of introspection a violent and painful affair? Why does it demand of man not only the characteristic intellectual virtue which is effort, but also the characteristic moral virtue which is disinterestedness? Is it merely because the intellect is set to point toward matter, because it is accustomed to move in and out amongst utilizable symbols, and thought finds it difficult to reverse that customary direction? There ought to be more to it than this; there certainly is more. And a new and different fathoming process will lead us to a

⁴¹ *Introduction to Metaphysics*, p. 71.

⁴² *Introduction to Metaphysics*, p. 58.

reality yet more fundamental and on that account yet more difficult to grasp.

Metaphysics, says Bergson, is not really herself save when she *surpasses* and *transcends* the concept, and arrives at intuition. Then she demands more than an *inversion* and even more than a *conversion*; "she requires a *transcendence* of nature and of habit. The concept yields us "all that concerns the thought of man in so far as he is simply human. . . . But philosophy can only be an effort to transcend the human condition." "And in truth, human conditions are veritably transcended by anyone who finds a way to *detach* himself, to a certain extent, from life and from action, and the normal conditions of exercising it," and to go beyond the symbolism of relations and things, the work of the human understanding. The object of this procedure is to rediscover, in its pristine purity, the reality which is external and yet immediately conveyed to our minds; to renounce all effort to insert reality forcibly and unnaturally in the rigid framework made by our understanding or to imprison it in a single exclusive system of relations, a "vast mathematic" which can only command assent provided our understanding itself organizes nature and does it relative to itself. On the contrary, philosophy makes an ever-renewed effort to

"This would mean turning our attention away from the aspect of the universe which is of practical interest and switching it back toward that which from the practical point of view serves no purpose. And this *volte face* of the attention would be philosophy itself (*Perception du changement*, p. 13).

"*Introduction to Metaphysics*, p. 77.

"*Bulletin*, May, 1901, p. 57.

"dilate" our minds to the compass of realities, "to transcend our customary ideas and perhaps also our elementary logic." It seeks finally to take up a post of observation inside at the very heart of things and to identify itself through intuition with the reality which is in motion there in a single flood, in an unbroken movement, wherein commingle pure homogeneity, the mere repetition characteristic of materiality, and an eternity of life, movement still, it is to be noted, "in which our own particular duration would be included as the vibrations are in light; an eternity which would be the concentration of all duration, as materiality is its dispersion." "

Thus, in studying the simple fact of movement and the reason why its existence is denied, we have discovered that the reality of movement lies in its very mobility, that it is duration and belongs to time and not to space. Then, by reflection upon the way in which we become acquainted with this knowledge, we have perceived it to be due to an intuition which enabled us to view movement from a post of observation within, and thus to sympathize or coincide with it. It has appeared to us that there are two ways of knowing, from within and from without, and that true knowledge, the knowledge absolute of duration as of all other things, is inside knowledge.

Finally, seizing the inner essence of movement in our grasp, which is reality itself, has led us to

⁴⁰ *Introduction to Metaphysics*, p. 83 Cf. Bergson's speech on the occasion of the Claude Bernard centenary

⁴¹ *Ibid.*, p. 66 Cf. the conclusion of the second lecture on the *Perception du changement*.

reflect upon the way in which this inner essence reveals itself to us, and this to a perception of its significance, the direction of its flow and its impetus. It has been made clear that this impetus is an upward one, that we cannot grasp what it is internally save by reaching out beyond, by surpassing, not only concepts and images, but perhaps even intuition itself; at least in its human form, in order to transcend ourselves. "Visibly there is a force working, seeking to free itself from trammels and also to surpass itself, to give first all it has and then something more than it has. What else is mind? How can we distinguish the force of mind, if it exist, from other forces save in this, that it has the faculty of drawing from itself more than it contains?"⁴⁴

Man, said Pascal, infinitely transcends man. And nature, too, infinitely transcends herself.

Thus each stage, as Bergson says,⁴⁵ has only served us as a foothold for an advance higher. And now we are face to face with the spiritual force, or at least with effects from which we can infer the existence of the spiritual force in which dwells the secret of all that moves and endures and has being.

This "science of concrete reality," this urge which carries us toward it, this "integral experience" which imparts to us the within of things, the hinterland beyond, is philosophy itself. In its essence it is something infinitely simple.⁴⁶ "To philosophize is a simple act," said Bergson; and again, "the essence

⁴⁴ *Mind-Energy*, p. 27.

⁴⁵ *Le bon sens et les études classiques*, p. 13.

⁴⁶ Cf. *Bulletin* of Dec. 18, 1902, p. 51, and the concluding words of *Introduction to Metaphysics*.

of philosophy is the spirit of simplicity."⁵¹ But it is a simplicity which must be won, a simplicity which implies and which gathers up within itself the infinite complexity and the infinite wealth of the exertion required to conquer it, the efforts and the sacrifices by which it has been earned. And for this reason, whoever desires to make its full value apparent must awaken the desire and the need for it and fan it into flame; he must never offer a solution to problems which he has not stated to himself, but proceed "to cultivate a wonder" that "⁵² may induce him to seek for that which is to be found, and show him, in simplicity, the reason and the interpretations of all that which without it would remain extremely complex and obscure.

Thus understood, the philosophical spirit is only the extension of common sense, which is the very core and essence of the spirit."⁵³ Like good common sense again, it endeavors to model its ideas upon reality; like it, the philosophical spirit demands an activity ever alert, an adjustment perpetually renewed to situations always novel, a continuous

⁵¹ *Revue de Métaphysique et de Morale*, 1911, p. 825. Bergson one day remarked to Lotte: "Philosophy, as I understand the term, should be neither criticized nor praised as an individual creation. It is nothing else, really, than a resolution, once made, to look naively both within and without. The sole purpose of my studies has been to express precisely what each one of us is bound to find within himself. Of course that means that there must have been some searching first, and unfortunately the attention of philosophers is not always concentrated on that particular aspect of the matter. Their lack of comprehension of just the simplest facts is almost incredible." (Quoted by J. and J. Tharaud, *Notre cher Péguy*, Vol. II. p. 125.)

⁵² *Bulletin*, p. 66.

⁵³ *Le bon sens et les études classiques*, p. 11. Cf. *Laughter*, pp. 187, 198, et *l'Energie spirituelle*, pp. 109-10.

effort of mental tension. Like good common sense, it dreads nothing so much as the ready-made idea, the inert residuum of intellectual effort, and "it does not so much desire to be right once for all, as to be always beginning again to be right"; "like good sense, finally, it derives its power and its virtue from the spirit of fitness and the spirit of fairness (*justesse et justice*)."⁵⁵ But the common sense here meant is of a superior kind, and if philosophy brings us back to the conclusions reached by that form of common sense, it is by a conscious and considered return "submissive to the control of the facts and receptive to criticism of its doctrines.

The philosophical spirit is akin to the instinct of the artist as far as its spontaneity, the rapidity of its decisions, and an almost "virginal" way of seeing, feeling, and thinking⁵⁷ are concerned; but it is distinguishable from it by the appeal it makes to the intellect as well as to the intuition, and by the fact that, besides pursuing the same path as artistic intuition, it advances further in order to seize the vital before its disintegration into images.⁵⁸

And lastly, the philosophic spirit is akin to the analysis of the scientist: it collaborates with it and relies upon it. If, however, it resembles the analysis of the scientist by its persistence in making use of positive methods and remaining in contact with facts, the philosophical spirit is distinguishable from it by its solicitude to become acquainted with reality

⁵⁵ *Le bon sens*, p. 8.

⁵⁶ *Ibid.*, last lines.

⁵⁷ Thus the man who proved the existence of movement by walking was right; only he failed to explain why he was right.

⁵⁸ Cf. *Laughter*, p. 154.

⁵⁹ Bergson's letter to Höffding, *op. cit.*, p. 159.

rather than just to measure it, and by subordinating itself to reality instead of trying to reconstruct it. This is why the philosopher, acting contrary to the mathematician, stops short in the development of his theories at the precise point at which logic would belie reality. This too is why, acting contrary to the physicist, he amends the mechanism of laws to adapt it to the creative force of the liberty which his inner experience reveals to him." Instead of working upon symbols as the scientist does, the philosopher works upon reality itself. Now this reality resists our laws and our methods of measuring and will not allow itself to be reduced to their compass; it is only partially pliable to them, and while this degree of pliability is enough for the uses of action, it is not enough for knowledge which, in this little *deviation*, pounces upon the instigation which gives our thought a fresh impetus and launches it upon the road to the discovery of new facts. Just as science is essential to the philosopher, the philosophic spirit is indispensable to the scientist, because without it the scientist is constantly tending to make realities of his concepts, to confound the original with its representation or its description, in short, to forget after a while that he is using signs and that his authority extends to symbols only. The philosophical spirit alone can teach the scientist prudence, compelling him to realize and, more important still, to remember the difference existing between symbol and original, by constantly reminding him that what he is measuring and enclosing in his concepts is not reality itself but its substitute.

" *Le bon sens et les études classiques*, pp. 8, 14.

Scientific symbols form a language. Now every language can at will either express or conceal the thought it interprets. Or again,* to take another comparison, familiar to Berkeley, "*scientific symbols are like a thin transparent screen which can either show us that which is real, or mask it from our view; metaphysics are indispensable to science because they teach it to perceive reality behind this screen.*"**

Science and philosophy are naturally complementary to each other, and nothing is more disastrous than severing them. Each, in its own sphere, is legitimate; the one, in the plane of quantity, extension, spatiality; the other in the plane of quality, tension, duration. But, whilst in the plane of quantity, consciousness extends outward, becomes dispersed and finally lost, in the plane of quality it enters within itself, recovers possession of itself, and fathoms its own nature. In this way it rises to a higher grade, in which science and metaphysics unite again in the intuition of integral reality.

This method is not *anti-scientific*, as is frequently, and wrongly, said when it is taxed with mysticism. "If by mysticism we understand, as we nearly always do understand nowadays, a reaction against positive science, the doctrine which I am defending," declares Bergson, "is from one end to the other nothing but a protest against mysticism, since it proposes to reërect the bridge, broken down since Kant's day, between metaphysics and science. . . .

* Cf. *Alciphron*, fourth dialogue, and note the admirable interpretation which Bergson has given of Berkeley's doctrine in terms of this intuition (*Revue de Métaphysique et de Morale*, 1911, p. 829).

But if we now understand by mysticism a certain appeal to an inner and profound life, then all philosophy is mystic."

This method is not *anti-intellectual*, as has been wrongly said repeatedly, for it takes issue only with that false intellectualism which brings ideas to a standstill, then juggles with them like counters. It seeks to reestablish the "true intellectualism which lives its ideas."¹ But it is a method which is *supra-intellectual*, in the sense defined by Bergson, who thought it necessary to reserve the term "intelligence" for the discursive faculties of the mind which were originally designed to cope with the matter.

The "intuition" which completes and perfects the mind cannot be reduced to the compass of intelligence thus defined. But, as Pascal says of faith, it "is above and not against." It does not disdain analysis and discursive thought; on the contrary, it makes a patient and prudent use of all available resources, for it knows that "a scientific and exact knowledge of facts is the essential preliminary condition for the metaphysical intuition which penetrates the principles governing them."² Perhaps Bergson's supreme merit is his ability to articulate and establish and illustrate his theses by significant facts carefully analyzed. But if it makes use of dialectic and analysis and discursive thought as a preparation for its intuition and to put it to the proof, the Bergsonian method subordinates them all to

¹ *Bulletin*, May, 1901, pp. 63-64.

² *Ibid.*, p. 64. Bergson adds that the spurious has always been opposed to the true intellectualism just as the letter is opposed to the spirit.

³ *Pensées*, 265.

intuition, as means are subordinated to an end."⁴ It does not despise the intelligence; it draws from it the strength by which to outdo itself and to outdo the intelligence; it receives from it the impelling urge that has prompted its rise to the point it has reached."⁵ But what it condemns is the claim made by the intelligence of its right to stop short at concepts, to bring reality back to them when it strays and shut it up within them, by shutting ourselves up within them; for concepts and symbols are, for intuition, but ground to be traversed in order to go far beyond and higher, right on to reality.

Thus *metaphysics*—the *science of reality*—may be constituted a positive science, I mean, progressive and indefinitely perfectible. The essential point is to make quite sure of the direction in which to proceed and then never stop, once that choice of direction has been made. The particular direction taken by the philosopher excludes all the others, and in his view this exclusion is final. It is useless to linger for the refutation of the false idea, for "the false idea automatically gives way to the true one when the latter is made sufficiently explicit; there is an indwelling force in truth." If the direction chosen be in line with the truth, he will end up there sooner or later: "The results collected along the way will go on correcting and completing each other indefinitely."⁶ But plainly the important point is to make the right choice; to state the problem as it should be put; to start in the direction that leads to the truth. Then, the

⁴ *Creative Evolution*, pp. 177-78.

⁵ *Vocab. phil.*, "Intuition," p. 274.

⁶ Extracts from a letter of Bergson's to the author, April 28, 1920.

further we proceed on that road, the nearer do we approach the truth; otherwise, the further we go, the greater the distance that we put between us and truth.

Philosophy is none other than this bent or this urge of the mind toward the truth, toward the real. Thus understood, and kept in touch with its source, it should include the whole man; it should unite in itself all that science and art have produced, that it may concentrate the whole on that which is within and bear it to that which is beyond. Philosophy is the movement of the soul toward the simple Infinite which is both in and above it, forever soliciting it to surpass itself.

CHAPTER IV

THE IMMEDIATE DATA OF CONSCIOUSNESS FREE WILL AND PURE DURATION

A TREE is judged by its fruits, and a method by its results. The exclusive claims of the analytical, discursive, and symbolical knowledge obtained by science, the fragmentary and external knowledge by means of which our understanding in ordinary practice takes a series of views of things from the outside, was opposed by Bergson. He desired to supplement the knowledge so obtained by the use of an original mental process which cannot be construed as a phase of the method of science—intuition. This is knowledge obtained through intellectual sympathy which, if it be a sound principle, ought to equip us to grasp the original itself behind the symbols which express it or conceal it, apprehend from a post of observation within what is simple and absolute in these originals, and thus indefinitely extend the conquests of human thought, in its contact with experience. Now it is time to present this method at work; to see whether it is applicable and under what conditions; to examine the results to which it has led, the errors it has unmasked, the facts whose existence it has revealed or interpretation it has supplied. Its value will be measured by its efficiency. By what

it has already taught us we shall be able to estimate what it still can teach.

But before proceeding to this examination and studying Bergson's work from this angle, a return to some points is essential in order to dispel certain misapprehensions, and to clear up anything ambiguous.

The term "intuition," like most terms in our language, is in fact essentially subject to the disadvantage of impoverishing and strangely distorting the original which it represents, but cannot express save by both rendering it immobile and by assimilating it to things already familiar. Every term we use is burdened with a past necessarily evoked by it in our minds the moment we use it; and from the use that has been made of it, from the words and things with which it has been associated, its habitual society and its points of contact, it has acquired and retains a sort of flavor, if we may put it thus, from which it cannot free itself. The thinker who employs it to designate something novel tries in vain to define its meaning exactly and limit it to that usage strictly, for inevitably a kind of recurrence of the earlier significance or acceptance of the word takes place. Then the vast majority of men yield to the natural propensity of human understanding and activity, and soon reduce the original to the term, and the term itself to its ordinary significance. It must never be forgotten that man is naturally lazy; he always aims at economy of effort, and this tendency gives birth to language and science alike, at least, in part, just as custom is its result. Now by a curious but inevitable repercussion, the Bergsonian method of intuition, which exacts from man an ever-

renewed effort to see afresh and to see true (which indeed is nothing else than this same demand, so to speak), has suffered from the vice which it denounces and which it tries to combat. From the moment when Bergson was forced to select a word to designate this exigent *demand for intellectual effort*, the word tended to push its original to the rear, and then to take its place, so that most people, in uttering it now believe themselves absolved from making the effort which the word denotes and requires. Where Bergson demands invention, people generally are content with repetition.

This is exactly what has happened to the term "intuition." The Bergsonian doctrine has been qualified as "intuitionist"; as this "intuitionism" it has been admired or criticized (very often without its admirers or detractors having really troubled to find out what Bergson means by it), and even those who deferred to the definition of it, which he proposes, rarely have taken the trouble to consider carefully, impartially, and in detail the applications of it which he attempted to make. Now the meaning of a term is defined by the use made of it, just as the scope of a method becomes manifest, not in the definition given of it, but as the outcome of its application. It is contrary to all the rules of logic and reasoning to pronounce judgment upon the intuitive method before studying its applications.

Most people, it is true, claim that they can dispense beforehand with all examination of this kind by defining intuition as a mystic process, *that is*, a non-rational, even an anti-rational one, which eludes every attempt at control. In taking this stand they are only giving in to the natural tendency we have

already strongly condemned. They reduce intuition, as a thing, to the compass of the word which denotes it, and they take this word in its ordinary sense, with that indefinable flavor which adds to the traits of simplicity, directness, rapidity, by which philosophers define it, a quality of instinctive divination, or vague presentiment, unattached to any precise object and, more particularly, based on no definite reason. Intuition, then, would be that for which no reason could be given, something which could not be justified or controlled, but if that were so it would stand in no need of reason or justification or control.

Now it must be remarked that nothing is further from Bergson's thought than such an interpretation; nothing more seriously distorts it. He is assuredly a mystic, as all masters of the inner life are, but if we understand by "mysticism" the negation of science (and this view, though highly incorrect, is current nowadays), Bergson tells us that his doctrine, from one end of it to the other, is nothing but a protest against such "mysticism." It is an attempt to reestablish contact between science and metaphysics, to bind them very closely to each other, and to make of metaphysics a positive science, susceptible of the same precision and capable of the same gradual development as the other positive sciences. Metaphysics, as Bergson conceives it, is in no way a matter of sentiment, subjective and relative like everything else which proceeds from pure affectivity. This is, however, the sense in which many people in these days take metaphysics, or else it is the sole legitimate meaning (a precarious and somewhat degrading legitimacy) attributed to it by

them. To Bergson, metaphysics is the most real and solid and positive of all sciences, because it is the science of reality, and he certainly would not accept the qualification of "sentimental" for his doctrine, save on condition, as he himself says, "that the word *sentiment* be taken in the sense given to it in the seventeenth century, including in it all knowledge that is immediate and intuitive.¹ Perhaps it would even be right to add, so that we may be quite exact, that the "heart" of Pascal, to which the "intuition" of Bergson seems in so many respects akin, partakes still more of knowledge than of sentiment, properly so named, because it is essentially, as the seat of the direct apprehension of principles, the principle of all our intellectual operations and the organ of truth. "We know truth, not by the reason alone, but also by the heart; it is in this latter fashion that we know first principles. . . . And it is upon the knowledge of the heart and of the instinct that reason must rely, and that all its argument is founded. The heart feels that there are three spatial dimensions and that numbers are infinite, and afterwards reason demonstrates. . . ." ² Reason *proves*, and the heart *knows*. Now there are many things we can prove and not know and other things that we know but cannot prove. Intuition is like the heart: it *knows*.

But intuition does not know offhand. If by "intuition" be understood a process which is not only distinct from the discursive intelligence, but one which can't dispense with it, then Bergson's doctrine

¹ *La philosophie*, p. 7. (The writer is here referring to Pascal.)

² Pascal, *Pensées*, p. 282. See the author's *Pascal* (Paris, Plon, 1923), pp. 302-9.

again, from one end to the other, is nothing but a protest against such "intuitionism." A form of intuitionism exists in fact which, like a certain form of intellectualism, is nothing but a doctrine of sloth, and quite as pernicious. Counterfeit intuitionism would trust blindly to all the spontaneous movements which come from nature, or possibly from fancy and imagination, without testing their value, just as counterfeit intellectualism limits itself to a mechanical manipulation of its formulas and its symbols without testing their significance. Both alike are to be avoided, for intuitive thought and discursive thought cannot be separated without very great injury to them both. *Intuition, as Bergson conceives it, is not short of intelligence, but ahead of it.* It does not exclude reasoning; it supplements and goes beyond it. It does not exempt us from intellectual work; it crowns, completes, and perfects that work. It traverses the operations of the intellect from end to end; it pushes them to their extreme limits; it goes further only because it has followed them the whole length of the road. It does not formulate itself till after reason has given its sanction. This explains why Bergson always refused to give out his intuitions or his beliefs until he had not only tested but confirmed them by facts, and prolonged analytical travail enabled him to articulate them in an exact form, impersonal and inevitable, that is to say, in a form fitted to command assent from sincere and thoughtful minds. Even if intuition sometimes dispenses with intellectual labor, it is extremely wary and does so only when it is dealing with objects which are closely allied with others over which, thanks to the previous toil of the

intellect, its competence is undeniable. Such is the opinion of Bergson on this point, of which many proofs might be given. He was not content merely with express approval of the remark of Maurice Blondel,³ that the "connoisseur's" competence when graded for quality (such as a doctor's skill in diagnosis, for instance) is "an intuition which has been slowly and laboriously arrived at," which suffices to prove that "intuition does not always precede and does not exclude discursive reflection and analytical thought," but "may also follow and be its compensation." He was not content with expressly declaring that, since intuition is no longer natural to us in the present working conditions of our thought, "we ought therefore, as often as possible, to prepare ourselves for it by prolonged and conscientious analysis, and by familiarizing ourselves with all the documents which concern the subject of our study"; that "such preparation is especially necessary when we are dealing with general and complex realities, such as life, instinct, evolution," and that "a scientific and exact knowledge of the facts is the preliminary condition of the metaphysical intuition which penetrates their principle."⁴ He has not been satisfied merely to say this, he has done it; and the most admirable part of his work, or, to express it differently, that which confers upon it profound and permanent value, consists precisely in the long, slow, and patient process of maturing undergone by each of his books, and the way in which Bergson has always scrupulously bent his mind to the yoke of reality, and strictly subjected all his hypotheses to the control of

³ *Vocab. phil.*, "Intuition," p. 274, note.

⁴ *Ibid.*

facts. We need only think of the enormous amount of analytical work which each of his great books must have entailed, and of the immense mass of material which he has had to investigate in order to sift out and obtain the *significant facts* upon which his conclusions are based. No parade is made of this, but it is all there, and it constitutes the value of his work. We may assert, without fear of contradiction, that this philosopher, in his philosophy, has shown himself more scientific than most scientists. Finally, the conclusion that follows, if we understand by "intuition" an unverifiable and uncontrollable presentiment or divination, is that the method and doctrine of Bergson are absolutely the opposite of intuition, in that the philosopher's constant care is no longer to provide general theories only, which have been usually as systematic as possible, but above all, as he says, to furnish "concrete explanations of particular facts," in short, *results* capable of becoming part of the heritage of human thought and of adding constantly to the store of the results already acquired. Bergson apparently thinks little of a doctrine unable to arrive at such results or to maintain its position, save by avoiding the test of reality, and only "tenable" on condition that it may remain "unverifiable." * He appears to esteem very lightly a philosophical method which would avoid

* In these days, as Bergson has often said to me, we cannot demand of a philosopher that he should know all the sciences, or even that he should specialize in any one of them in the way required to know it thoroughly, for in our epoch to render time elastic enough to embrace all would be the squaring of the circle. But the philosopher must be capable of assimilating those sciences which pertain to the subject he is studying, so as to be competent to follow its progress. And this is possible, as Bergson has proved to us.

any appeal to experience, either external or internal, and refuse to submit its proceedings to the censorship of science or of consciousness. And he extols Pascal because he "introduced into philosophy a certain way of thinking which is not pure reason, since it corrects by the *esprit de finesse* the mathematical part of the reasoning; which is not mystic contemplation either, since it ends in results which are capable of being examined and verified by the world at large." * *To end in results capable of being examined and verified by all the world*, is, undoubtedly, the goal which Bergson proposes for himself. To his mind, this is the rule that determines the efficiency of a method; this is the touchstone of a doctrine. And this is exactly what we shall now endeavor to show in his work—*facts and method*.

The first object to which his method applies, the first reality which intuition reveals to us, is the ego. We must start from the ego; we must begin with it as preparation for proceeding afterwards to the body, to life, to matter, and finally as equipment to explain the universe and the ego itself, not only in its nature, but in its principle. Bergson pursued this path; no other was possible to him from the moment he resolved to model his thought according to the very essence of his method strictly upon reality, and regulate his steps by it.

His first work, the fruit of the intellectual crisis he went through at Clermont Ferrand, which determined his whole philosophical orientation, bears a title which is eminently significant, and its every

* *La philosophie*, pp. 7-24.

term needs to be weighed: *Essai sur les données immédiates de la conscience.*¹

The word "*données*" (data) is the opposite of "construction," and the reference it always arouses in the mind, as Lachelier has noted, is to a fact, assumed or ascertained, which is to serve as a starting-point for research. Such facts are primitive terms, ultimate principles, beyond which, as Pascal would say, our analysis cannot proceed. It is no longer a case of constructing the world, to make it conform, willy-nilly, to a system, as the Germans do; it is a case of ascertaining precisely what is given, which is a much more exacting and praiseworthy task. It is much more difficult to become acquainted with a man's history than to imagine his romance. It is always easy to go its full distance with an idea; the difficulty is to check the deduction where it should be checked, or to deflect it as it should be deflected to make it square with reality. It is easy to indulge in the play of dialectics, the manipulation of abstract concepts; the difficulty begins when a man desires to get in touch with reality in its essential simplicity and its infinite complexity, because, to do that, his thought must be expanded indefinitely.

The data upon which Bergson relies are those of consciousness: data immediate or direct, that is to say, seizable at a glance by intuition, without the middle term which, as Aristotle would say, analytical thought always and necessarily makes use of, and consequently freed as far as possible from all that

¹ This work was translated under the title, *Time and Free Will, The Immediate Data of Consciousness*, in 1910.

in cognition does not proceed from the object itself,* consciousness being the faculty of seizing from a post of observation within oneself reality in its interiority.

A preliminary question arises just at this point, to which an answer must be given. Why, it has been objected to Bergson, should we accept unreservedly as true and real the ultimate data supplied by consciousness? And Bergson replies: "Because all philosophy, whatever it may be, is obliged to start from these data. If we are treating of free will, either to affirm or to deny it, we set out from the direct feeling which we have of it. If we are speculating about movement, we set out from the immediate consciousness of mobility, and so on. . . . In short, my data are only those which everybody admits at the start."† If, therefore, these immediate data cannot be attached to and held within the concepts of the mind, must we lay that blame on the data or the concepts? "The immediate justifies itself and has its own inherent value," whilst all concepts are relative to one or another point of view and consequently appear to be a source of contradictions; but "the return to the immediate does away with contradictions and oppositions by canceling the problem over which the struggle is being waged." By this sign we recognize "the true intuition of the immediate." Are we to say, however, that the knowledge of an object in the nude, stripped of all that is not the object itself, and freed from any subjec-

* "Prophecy is speaking of God, not by means of outside proofs, but by an inner and direct feeling," had already been remarked by Pascal in a very noteworthy passage (*Pensées*, p. 732). In the manuscript the word "*immédiat*" is underlined.

† *Vocab. phil.*, "*Immédiat*," p. 331.

tive intermediary or any contribution of the subject, is an impossibility? Here the question is a peculiarly subtle one,¹⁰ and it cannot be solved seemingly, save by the examination of special cases. It is certain that even in intuition we must never be exclusively absorbed by the material nature exclusively of the object; the real object is the object *perceived*, not *conceived*; the whole difference lies there. And we may assert, without fear of making a mistake, that if a direct datum is not pure objectivity, at least it contains something that is objective and real, something given to and not constructed by us. We may assert, too, that under normal conditions the mind works constructively upon this datum, or more exactly, reconstructively, in ways indicated by the datum, for the purpose of reconstituting and interpreting. It is plain, also, that on close examination it can be discovered in one sure glance in what degree our reconstructed datum completes, and how far it deforms its original, or, if you will, how far the datum is *conceived* and how far it is *perceived*. The product of pure conception, it must be remembered, in the case of external objects is an hallucination, and that of a conception which deforms is an illusion. Perception is only a *réconstruction*—not construction—of the whole of the material object of which

¹⁰ To answer it, it would not suffice to say, with Bergson, that "this criticism implies that consciousness attains the subjective only" (*loc. cit.*, p. 333), for such a reply only affects those who, like Fouillée (*ibid.*, p. 331), conclude from the presence of subjective elements in the immediate datum that it is pure subjectively, exclusive of objectivity, which is patently vicious reasoning, confusing the "all is not" with "nothing is." But setting aside this objection, it still has to be established that the presence of subjective elements does not prevent the direct datum from having an objective validity.

our senses furnish immediate data that can be directly expanded, but are divided up by the multiplicity of our needs. In this view of the case, "the objectivity of the material thing is immanent in the perception we have of it," and "the act of cognition coincides with the act creative of reality." However, this may be where other objects are concerned, when the object upon which our consciousness is brought to bear is not the external world but our ego, the question becomes much simpler, because here the subject coincides with the object and cannot mask it from our view. As all admit, there is in the knowledge of the ego by consciousness something which is immediately given to the "me"; it is the "I" myself.

Immediately, yes; but this does not seem spontaneously—on sight and without effort. On the contrary; just as Bergson has very rightly noted, the immediate is far from inclusion in that which is most easily perceptible; like intuition, which is its instrument, the direct datum appears at the end of a long search and an untiring effort to remove the veils which disguise it, but on our entrance into its presence, it is there; we feel it and see it, and cannot fail to recognize it, for the object then has become one with the consciousness of it.

The *Essai* is an attempt to bring us face to face with the direct data of the inner life.

Let us endeavor first of all to sketch its design and to recapture the flow of the thought which runs like a transparent stream through the book.

The problem studied in the *Essai sur les données immédiates de la conscience* is the problem of free will. Bergson applies his method to it, and essays to demonstrate that the objections put forth by the

determinists to free will all proceed from an incorrect translation of duration into extension, of quality into quantity, and that when this misunderstanding has once been removed the objections raised by them to free will vanish, and in a certain sense, the very problem of free will itself. This demonstration is contained in the third chapter, and the two earlier ones, in which the author studies the ideas of intensity and of duration, serve as an introduction to it.

Kant, as we know, and the phenomenal school after him, maintain that we perceive things through the medium of certain forms which we have borrowed from our own constitution, so that the empirical psychologists have endeavored to reconstruct the extensive from the intensive, space from duration, and external phenomena from inner states. Bergson, posting himself at the common-sense point of view, reverses the problem and asks whether the more obvious states of the ego, which we think we grasp directly, are not in most cases perceived through the medium of certain forms borrowed from the external world, that is, from the world of space. Those intermediaries would thus contaminate the consciousness we have of ourselves, and require to be eliminated or rectified before either the ego could be contemplated in its original purity, or reality itself in its very essence.

What are these forms? If psychic states be considered in isolation one from another they appear as of greater or lesser intensity; envisaged in their multiplicity they unfold themselves in time, and constitute duration; finally, in their inter-relations, in so far as a certain unity runs through their multiplicity, they appear mutually to determine one

another. Intensity, duration, voluntary determination—these are the three ideas which have to be clarified, unmasked, and freed from their spatial disguise.¹¹

1. Psychic phenomena are pure quality; things in space are quantity. Things in space, moreover, are frequently found associated with psychic phenomena, in so far as they are the stimulating cause of them, and our intellect finds it easier to comprehend quantity than quality, space than interiority, since it only thoroughly understands what it can measure, and space alone is measurable; it expresses differences or change of quality in our psychic states as differences or variations of quantity, thus converting an intensity which is only a qualitative change into a spatial magnitude, capable of increasing and diminishing. Such is Bergson's thesis; let us see how he arrived at it and how he proves it.

Bergson does not deny that a psychic state possesses intensity. Its intensity, according to him, is not something false and non-existent, as others have made him declare; but it needs to be explained, for the whole question is to find out whether psychological intensity is a magnitude. When we examine carefully what we mean by "intensity,"¹² we perceive that this concept presents itself in a twofold aspect, and assumes two somewhat different meanings, according to whether it is applied to deep psychic phenomena, which are self-sufficing, to sentiments like joy or sorrow, deep passion, æsthetic emotion, or to states of consciousness which are

¹¹ *Time and Free Will*, pp. 224-25.

¹² *Ibid.*, p. 77.

manifestly connected with some external cause, like representative sensations, properly so called—two limits between which a whole gamut of intermediate states is to be found. Now in the case of deep psychic phenomena we call intensity the multiplicity which is more or less vaguely felt of the elementary psychic states of which the fundamental and complex state is composed, or rather, which might enter into it, for this multiplicity only “potentially” exists in them, as Aristotle would say, and it is our thought that ends in “actualizing” it by means of its analyses and dissociations. In this case a growing intensity is a growth in quality, an increasing complexity of distinct states, but we interpret it as a change of magnitude, as would be the case were it the increase of one and the same state anchored to a spot assigned to it, because “our consciousness is accustomed to think in terms of space and to translate its thoughts into words.”¹³

When we are dealing with comparatively simple states, like a sensation of sound or weight or light, which are representatives of a cause appreciable in extent, and measurable, or associated with such a cause (and this is the most important species, because they occur most frequently), “the perception of intensity consists in a certain estimate of the magnitude of the cause by means of a certain quality in the effect”;¹⁴ in other words, a certain quality or nuance of this state warns us, thanks to association or to an experience acquired of the approximate magnitude of the cause whence it emanates, and we thus bestow the quality of the effect on the quantity of

¹³ *Ibid.*, p. 26.

¹⁴ P. 72.

the cause, converting these changes of quality into variations of magnitude, measurable like all other magnitudes. It is to this postulate that psychophysics owes its origin; it is this fundamental illusion which vitiates its conclusions at their bases.

How does the psychophysicist go to work? How does he proceed in seeking to establish his claim that "the growth of a sensation keeps pace with the logarithm of its stimulus"? He admits that sensation varies slowly and by abrupt leaps, whilst the stimulus varies more quickly and does so continuously;¹⁸ he assumes that each difference in the successive sensations is readily translatable (there is no need to take into account the specific quality of each member of the chain) into an equivalent difference in the physical cause which provokes it, since each of them corresponds with the very slightest perceptible increase in the stimulus, in such a way that if the quantity of light, or even of weight, is increased continuously, for instance, the differences we perceive between the shades of light or the weights (differences which all express the minimum increase perceptible)¹⁹ turn out to be quantities equal to each other. So he concludes that all these minimum differences, being identical as thus determined, may be added, and that any one of the sensations obtained can be equated with the sum of the differences which divide from one another all sensations previous to itself, counting from zero upward. But only entirely arbitrary conventions permit us to speak of arithmetical differences, or arithmetical

¹⁸ Cf. pp. 62, 64.

¹⁹ We call "the minimum of perceptible increase" the smallest difference which must separate two stimuli in order to produce two distinct sensations.

equalities of sensations, or to assimilate a sensation to a sum. We can indeed divide the physical stimulus which was the cause of the sensation into its component parts, because it is quantitative, but the sensation itself is a simple and indivisible whole, qualitative by nature.

Psychophysics has only formulated in precise terms and pushed to its extreme consequences the conception which converts our states of consciousness to measurable magnitude, and their intensity to a quantitative increase. To be sure, the intensity we attribute to them is not quantity, but in our eyes it is its qualitative sign: it is a hybrid concept, the issue of a compromise between pure quality, which is the state of consciousness, and of pure quantity, which is necessarily space¹⁷ and all that is distributed in space. But if you renounce this compromise, says Bergson, when you study external things, which are quantitative in character, why should you not also renounce it when studying the state of consciousness which is qualitative? And if in the one case you do not hesitate to eliminate from intensity all that is qualitative, why in the other should you not eliminate all that is quantitative?

2. "The idea of intensity is . . . thus situated at the junction of two streams, one of which brings us the idea of extensive magnitude from without, while the other brings us from within, in fact, from the very depths of consciousness, the image of an inner multiplicity. Now, the point is to determine in what the latter image consists, whether it is the same as

¹⁷ In our own days this point has been hotly disputed. We shall show later what is to be thought about it.

that of number, or whether it is quite different from it." ¹⁸ What becomes of it when the space in which it unfolds is eliminated? We shall find here a confusion which is even more serious than the former one, because it corrupts, at their very source, our representations of outer and inner change, of movement and of freedom.

Every multiplicity appears to us in the form of a numeral-multiplicity of a number, ¹⁹ that is, a collection of units, a composite of the one and of the many; for unity itself, with which we construct numbers, is a true number, capable of being divided up and redivided into fractional parts indefinitely; provisionally we regard it as indivisible, so that we may compose other numbers with its help, but the only definite unity is the unity of a simple act of the mind. On this basis, the units that we add to one another must all be identical; otherwise an enumeration could be made of them, but not a total. On the other hand they must all be distinct, or else they would keep merging into one, and when added together, they would never make more than one. *Now in space alone is a juxtaposition of this kind possible, because space alone, being homogeneous, permits units to be differentiated and identified at the same time, that is, to be added together.* ²⁰ For the construction of a number, therefore, a necessary condition is an intuition of a homogeneous medium, that is, space, in which terms which are distinct, yet all similar, are placed in line, and may accordingly be added together without becoming merged.

¹⁸ *Time and Free Will*, p. 73.

¹⁹ *Ibid.*, pp. 75-80.

²⁰ *Ibid.*, p. 77. Cf. p. 85.

Now it is in this spatial and numerical form that every multiplicity presents itself to our minds, not excepting the multiplicity of our inner states, which is a qualitative multiplicity without any resemblance to number. This other is a multiplicity of permeation, of which each increment fills the whole soul; a pure heterogeneity, within which spatial differences can establish no foothold, a pure duration, the moments of which are not external to each other. Through confusing these two kinds of multiplicity the error of the *associationists* has arisen; they take delight in juxtaposing the psychic states and drawing them up in line in a well-meant version of duration which they maintain to be *reversible*, but their duration is really nothing but space. They undertake to reconstruct a psychic state, and the ego itself, by the addition of elementary states of consciousness, "thus substituting the symbol of the ego for the ego itself."¹¹ This gives rise to the still more grievous, because more fundamental, error, which has already been criticized in the case of the Eleatics. For an inner duration which is concrete and heterogeneous, it substitutes time, an external, abstract, and homogeneous time, which is itself a close imitation of space and, like space, calculable. This homogeneous time, which is not duration but the symbol used to represent it, is "clock time." We count it by noting the instants of *simultaneity*, between a moment of our own duration, which belongs to a succession of which the unit members are not reciprocally external, and a phenomenon contemporaneous with a clock moment, that is, of one of the oscillations of its pendulum. There are reciprocally

¹¹ P. 226.

external units that do not belong to a succession and are therefore capable of being indefinitely juxtaposed, but they succeed one another for our consciousness only. Simultaneity, situated at the intersection of time and space, thus serves as a connecting link between these two and becomes a kind of pivot which permits us to pass from one to the other and then to reduce time to space. It enables us to declare motion, for instance, to be homogeneous and divisible like the space which subtends it, and thus make it again into a series of immobile positions—as if the whole essence of motion did not consist of a progress from one position to another.” But this progress, which is qualitative, possesses no reality except for a conscious spectator, able first of all to register, and then to recall, the successive positions and make a synthetic whole of them.

Science dissociates these two elements from which the hybrid concept of measurable time or of succession in simultaneity is constituted when it undertakes the study of external phenomena, retaining only the measurable element, and eliminating the qualitative, which is nevertheless the essential element. In this way science retains of time only its simultaneity, and not its duration; and of movement only the positions of the moving body, and not mobility—the extremes of the interval, and not the interval itself.

In the inner life the situation is quite otherwise. There “we no longer measure duration, but we feel it.”²² Only, now that our consciousness has been

²² Pp. 108-12, 227-28. This point has been very clearly brought out by Edouard Le Roy in his book *Une philosophie nouvelle: Henri Bergson* (Paris, Alcan, 1912).

²³ *Time and Free Will*, pp. 126 et seq.

wrongly trained, to rediscover and then to feel this fundamental duration, as an unsophisticated consciousness would feel and perceive it, a vigorous effort of analysis is necessary; we must dissociate the two elements of time, but on this occasion duration will be the gainer. Now such an effort is infinitely more difficult of accomplishment, but it is only by paying this price that we shall vindicate duration within ourselves, and perhaps outside ourselves also. Within us, first of all. As a rule we live upon the surface of our ego, and to penetrate within we must cast aside those inert states of consciousness which float on the surface, "like dead leaves on the waters of a pond." They are to some extent, indeed, not our very own, because they are the impersonal residue of states which are common to our social group. We must not be surprised "if only those ideas which least belong to us can adequately be expressed in words." "It is to these only that the associationist theory applies, but in ourselves they permit that which is precisely ourselves to slip from their group.

Is it not necessary to go further still? Cannot the legitimacy of the point of view of science be disputed in its own domain, that is, outside ourselves? This remains to be seen. But since (1) the converting of motion to the positions of the moving body, and of duration to space, ends in fact, as we have shown, in the negation of movement and time itself, and since (2) the indefinite increase in the simultaneities that the scientist notes never permit him to reconstruct what occurs in the interval between any two simultaneities, and (3) *as, on the other hand, there*

" *Ibid.*, p. 136.

exists, nevertheless, in things themselves, and even in matter, something that resembles real time; as it appears to consciousness—then” we must conclude that science could not do without consciousness, even for the correct representation of things which belong to its own province, and to which its measuring processes can best be applied.

3. Thus duration, restored to its original purity, presents itself as a qualitative multiplicity, quite different from the numerical multiplicity proper to space, a heterogeneity of states which are naturally interpenetrating and that constitute in us the “continuous development of a free person.” Now it is precisely because they have neglected to make this distinction and effect this separation that the determinists have been led to deny liberty, and their opponents to define it, which indirectly amounts to denying it also. Both in substance ask whether an act just performed could or could not have been foreseen by anyone acquainted with the whole of its conditions or antecedent states; “whether they assert or deny it, they admit that this totality of conditions could be conceived as given in advance,” and that the coming act is prefigured in its present conditions. This amounts to treating duration as a homogeneous magnitude or, to put it differently, as a fourth dimension of space, along which events are disposed in such a way that our consciousness in traveling through time, like H. G. Wells’ explorer, would encounter them. All forms of determinism, starting with physical determinism, end up here,

“In his *Essai (Time and Free Will)*, p. 227) Bergson still only hints at this, but the position cannot be denied, and he will recognize it more and more clearly in his *Evolution créatrice*, and then in *Durée et simultanéité*.

but then all the definitions we try to give of free will end up here too, and whether we will or not they favor determinism. "The self, infallible when it affirms its immediate experience, feels itself free and says so; but, as soon as it tries to explain its freedom to itself, it no longer perceives itself, except by a kind of refraction through space. Hence a symbolism of a mechanical kind, equally incapable of proving, disproving, or illustrating free will." "

As a matter of fact, a free act, like the under-surface self from which it proceeds, is inexpressible, and it is inexpressible precisely because it is free. We very clearly perceive that *we are not subject to compulsion*, as are physical things, but wherein this freedom of ours consists we cannot tell. How analyze a progress? How immobilize a movement? How construct in terms of the intellect something which is not intellectual? As soon as an attempt is made to define a free act it becomes solidified in concepts and in words, and justification is in fact given to the associationist conception which arranges our states of consciousness like atoms in a straight line within us, and sees them, or believes it sees them, in the process of interweaving and mechanically determining each other, and then credits them with the capacity of reproducing themselves in time like physical phenomena. In a world thus conceived there is no room for freedom; there is nothing left but to deny it, as the determinists do, or to relegate it, as Kant does, to the *timeless* domain of "things in themselves," a domain inaccessible to consciousness.

But if every definition of freedom seems to favor

" *Time and Free Will*, p. 185.

determinism, experience gives the lie to it. Experience shows that the effect frequently precedes its cause, that we make up our minds first and deliberate afterwards, and that even when we obey a motive or an impulse we are obeying ourselves and not some force outside ourselves. We are the forced slave of a determining impulse, but the servant by choice of this impulse; we act by ourselves and for ourselves. This is true because each of our states, each of our loves, each of our hates expresses our character, and our character again is ourselves, so that every act which bears the impress of our personality is really free. "The progress which has rendered reasons decisive is a progress of the whole personality, viewed as one and indivisible." ¹¹ To sum up therefore: "It is only an inaccurate psychology, misled by language, which will show us the soul determined by sympathy, aversion, or hate, as though by so many forces pressing upon it. These feelings, providing that they go deep enough, each make up the whole soul, since the whole content of the soul is reflected in each of them. To say that the soul is determined under the influence of any one of these feelings is thus to recognize that it is self-determined." ¹²

It is a form of determination, moreover, that has no analogy in the physical world, because it includes the idea of force, or "free spontaneity," which excludes, indeed, that of "necessary determination" or of equivalence between the preceding and the following moment, between the act and its antecedents. The relation of this force to the act which

¹¹ *Bulletin*, Feb., 1903, p. 102.

¹² *Ibid.*, p. 165.

results from it, i.e. the relation of inner causality, is a relation *sui generis*, a purely dynamic relation; it is absolutely different from the relation between two external phenomena which condition one another. Because the latter are capable of recurring in homogeneous space, and also because they are strangers to true duration, they are fitted to enter into the composition of a law, but "the more profound psychic states occur once in consciousness and will never occur again."²⁰ We may then say with the poet: "*Aimez ce que jamais on ne verra deux fois.*" For these are pure states, unique states, not under the government of any law; hence they can neither be foreseen nor measured nor expressed by any law; we cannot become acquainted with them unless we locate ourselves on the intuitional and not the analytical plane. The free act is a veritable unity, seizable directly by consciousness, lived and perceived from within, and never repeated; it is not a multiplicity composed of external and mediate and common views which serve as its more or less symbolical representatives, yet always distort it."²¹

Our inner life is not mathematics, but history; we do not live in space, but in the world of souls.

Assuredly, free acts, thus understood, are rare, and for this reason we are rarely free. "We live for the external world rather than for ourselves; we speak rather than think; we 'are acted' rather than act ourselves. To act freely is to recover possession of oneself, and to get back into pure duration."²²

This brief analysis can give us only a very sum-

²⁰ Pp. 218-19.

²¹ P. 239.

²² Pp. 231-32.

mary idea of the book itself, for we have had to pass over all the subtle, delicate, and profound psychological analyses which give it its charm as well as its power of conviction. But it is not intended to take the place of the book and excuse the student from reading it. On the contrary, its sole aim is to induce him to read it and help him to understand it.

There is infinitely more that could be said about the book, for all Bergson's teaching is here in germ, and more than in germ. We must necessarily confine our attention, however, to a few points.

1. First of all it is well to note the profound originality of the views expounded by Bergson. The ideas of free will and of contingency were certainly not novel at the time he wrote, but the elaboration and the psychological demonstration of these ideas and, better still, the psychology founded upon them, were then a thing unknown, at any rate in France."

Psychology was then regarded indeed as a natural science which, were it to become really constructive, would proceed, as the natural sciences do, from without to within, and advance through experimentation,

"It has been wrongly maintained that the Bergsonian conception of inner duration had been previously established under the influence of James Ward and William James, but, as Bergson has shown, in his letter of July 10, 1905, published in the *Rev. philo.* (Vol. IX, pp. 229-30), Ward's conception of the "presentation continuum" and James' "stream of thought" have not the same significance or the same origin as the thesis of "real duration," which is moreover an independent one. Bergson did not set out from psychology; he arrived there, after starting from the mechanistic notion of time, and by "seeking the concrete underlying mathematical abstractions." The criticism of the mechanistic doctrine and the return to introspection in these three philosophers is not an accidental result therefore, but the sign of a profound movement of thought, as Bergson himself points out. See Bergson's Introduction to the French translation of James' *Pragmatism* (Paris, Flammarion, 1911).

which cannot get along without the use of measurement; for, as Wyndt says, "measuring and weighing are the supreme methods employed by experimental research to arrive at definite laws." Now since measurement is applicable to psychic phenomena only through the medium of their physical concomitants, on these the earliest efforts were concentrated, and then the whole psychological life was surreptitiously reduced to them. As a result, the mind was considered nothing more than a machine for making *reasonings* and *movements*, two things which at the bottom are identical, because they are mutually dependent and reducible in consequence to mechanism. This more or less avowed metaphysical postulate is, as we have found, at the base of psychophysics, and also lies concealed behind every materialistic doctrine of the mind.

Now Bergson condemned this pseudo-metaphysics, and ruined it forever (although in certain surroundings it is outliving its age), *not by opposing another metaphysics to it, but by confronting it with facts over which the doctrine stumbles, those significant facts*, namely, which furnish the concrete illustration, the testing-point, and the proof of an *idea* perceived in its essential simplicity. They are facts of indisputable verity, bewildering facts which will never grow old; facts vastly different from the *pseudo-facts* in constant use by science, for these are nothing but fragments of theory, unwarrantably interpreted in the language of facts. When Aristotle, in the beginning of his *Metaphysics*, shows that a man only teaches well what he knows, he enunciates a fact both infinitely simple and infinitely significant, which will be true as long as mankind endures.

When the psychologists of the last generation constructed their whole description and explanation of thought either upon the Flechsig theory of the pretended existence of "fibers of association" linked up to "centers of projection," or, more generally, upon cerebral localizations, they were relying upon *pseudo-facts*, which were neither facts nor ideas," and which passed out of fashion with the men who had forged them.

The psychophysicists, too, based their doctrine upon *pseudo-facts*, derived from spurious metaphysics. To Bergson's supreme credit, he condemned their error.* His criticism of the conception of

"A mere translation into the language of physiology, regarded as "more scientific," of realities known only through consciousness.

"This criticism of psychology by Bergson, as well as that presented by Jules Tannery, has recently been called in question. Some have maintained that "the category of quantity is more general than that of measure," so that the intensity of psychological phenomena may be admitted without necessarily admitting them to be measurable; others, that measurable quantitative realities are not all reducible to space, that the idea of quantity is not to be confused with the idea, or rather the image, of extended quantity, and that there are other magnitudes besides spatial magnitudes. Indeed, it may be maintained against Bergson that the *idea* of intensity (like the idea of number) is in itself separable from the spatial *image* (cf. *Time and Free Will*, p. 3), which generally accompanies it in our minds. But this would not in any way rob Bergson's conclusions of their decisive force, and it would still be no less true, as we shall try to show later, that psychophysics, like every other mechanistic philosophy, is in error when it pretends to reduce qualitative changes to simple quantitative variations and differences of nature to differences of degree. *Quality, and it alone, is irreducible to measure.* This is what Bergson established ("Either, then, sensation is poor quality, or, if it is a magnitude, we ought to try to measure it." *Ibid.*, p. 72), and this is confirmed by Duhem ("Upon quality, measure, the result of the notion of addition, has no hold." *La théorie physique*, Paris, Rivière, 1914, p. 166), and by H. Poincaré (*La science et l'hypothèse*, Paris, Flammarion, p. 47). If magnitudes exist which are not measurable—as in the case of *analysis*

intensity was thus a direct application of his method and of his original intuition, and this struck everybody first of all, because Fechner was at that time held in high esteem just as to-day, if Bergson were to begin a book by criticizing Einstein that would be the part best remembered. But what interests us chiefly in the Bergsonian criticism is the *way* in which he took exception to the error of psychophysics: he countered its *pseudo-fact* with the true *fact*. "A constant experience," he says, "shows us a definite shade of sensation corresponding to a definite amount of stimulation. We thus associate the idea of a certain quantity of cause with a certain quality of effect; and finally, as happens in the case of every acquired perception, we transfer the idea into the sensation, the quantity of the cause into the quality of the effect. At this very moment the intensity, which was nothing but a certain shade or quality of the sensation, becomes a magnitude. We shall easily understand this process if, for example, we hold a pin in our right hand and prick our left hand more and more deeply. At first we shall feel, as it were, a tickling, then a touch which is succeeded by a prick, then a pain localized at a point, and finally the spreading of this pain over the surrounding zone.' And the more we reflect on it, the more clearly shall we see that we are here dealing with so many qualitatively distinct sensations, so many varieties of a single species. But yet we spoke at first of one and the same sensation which *situs*—it is because they are at bottom purely *qualitative*. This conclusion, which is of vast significance, is to a certain extent independent of the way by which Bergson arrived at the same conclusion, the arguments he uses to support it, and the imaginative representation he gives of it.

spread further and further, of one prick which increased in intensity. The reason is that, without noticing it, we localized in the sensation of the left hand, which is pricked, the progressive effort of the right hand, which pricks. We thus introduced the cause into the effect, and unconsciously interpreted quality as quantity, intensity as magnitude." ¹⁵ There is the fundamental mistake.

What is this but saying that somewhere in this process of continuous quantitative increase there is a discontinuity of a qualitative nature? The prick and the tickling are not two degrees of one and the same state, as are the pressures of the pin to which these two sensations correspond. They are two specifically disparate facts, because qualitatively different, and, as a consequence, incomparable, irreducible, like the colors red and green." ¹⁶ There is not a simple difference of degree between them, as between their physical causes; there is a difference of nature. The prick is not the tickling multiplied by the number—it is not *more* than the tickling (for the latter may constitute a torture more intolerable than the most severe prick); it is *something else*. If I come out of the darkness into a room in which a candelabra with twenty-five candles is lighted, I experience an agreeable sensation. If I am taken from the darkness into a hall in which a hundred such candelabras are alight, I am dazzled and blinded, and the second sensation is not in any sense the first multiplied by the coefficient *n*.

¹⁵ *Time and Free Will*, pp. 42-43.

¹⁶ The sensations of red and of green are irreducible to the number of vibrations producing them. In the same way it would be impossible to convey an image of them to anyone without eyesight.

Now these facts, ascertained with regard to us, within ourselves by immediate and infallible experience, have an incalculable significance. They reveal to us, indeed, how a continuous quantitative process may be the mask of a qualitative discontinuity, or, if you will, that *a continuity apparent on the surface may mask a real breach below the surface*. There is such a breach between matter and life, between the ape and man, etc. In this simple fact we find in germ the indictment and, in its train, the final refutation of all mechanism, all false evolutionism, all materialism, and in general all the reductive doctrines which, under pretext of explaining the object, explain it away.

2. Bergson's critical analysis of the motion of time, which was his great discovery, did not attract as much attention as his criticism of the motion of intensity. Instead of being applicable to existing doctrines, it was on the way to doctrines which had not yet been explicitly formulated, but which have since seen the light of day and roused world-wide interest. His book *Durée et simultanéité* is devoted to a searching examination of these recent doctrines improperly known under the name of "Theory of Relativity." In this monograph, Bergson takes up again the very same concept of duration which he expounded in his first *Essay*, restating it with greater accuracy and fullness and confronting it with Einstein's views.

There is no intention here to go to the heart of this debate. Such an attempt would be at least premature; and it would be imprudent on our part.

Note should be taken that the brief outline which follows is not concerned with the General Theory of

Relativity. This theory is unquestionably of great value. It is well in line with the Cartesian tradition of modern science, in so far as it endeavors to reduce physics to geometry or, to speak more exactly, to treat physics like geometry.²⁷ By reducing gravitation in substance to inertia it has led to the elimination of several concepts, such as the Newtonian concept of force, which stood between physicist and object, between the mind and the constitutive *relations* of the thing, and thus hindered the work of converting physics into geometry. Even if the experimental basis of relativity is one day disproved and abandoned—which is very possible—the General Theory of Relativity would retain its value as a physical synthesis which reduces the physical world to space, according to Descartes' ideals, and to the *measuring of space, which is all there is to its nature*. Just as the "geometrical field" has been studied and the postulates underlying Euclidian geometry analyzed, in the same manner the General Theory of Relativity, by a bold application of metageometry to the realm of physics, has given rise to the study of the "physical field" and of the postulates underlying our physical theories.

But time is not reducible to its measurement as is

²⁷ It can also be said, as Bergson himself pointed out, that this theory goes beyond Descartes' great intuition to meet the Aristotelian doctrine of local motion. "You claim," Einstein writes, "that the motion of a planet is a compromise between two motions, the one throwing it constantly toward the sun, the other hurling it constantly according to the tangent in a straight line, but you have never seen either the one or the other of them. It is much simpler and much truer to say, the planet moves round." This is the Einsteinian notion of the curvature of space, by virtue of which a ray of light traveling indefinitely ahead would finally return to its starting-point.

space. "Growing old and duration belong to the qualitative order. No analysis, however extensive, can reduce them to pure quantity." ** Bergson criticizes this attempt to reduce time to its measurement, which is a characteristic of the Restricted Theory of Relativity, or rather of the philosophical conclusions which some have claimed to draw from it. As Bergson says, these conclusions lead only to confusing the *real* time with the *fictitious* time, the thing measured with its measurement, the original with its symbol. Einstein answers that Bergson has misunderstood him and that his misconception errs on the purely physical side of his theory. ** It is no function of ours to decide between two thinkers who are probably moving in two different planes. However, there is an important consequence which is well worth retaining from the philosophical discussion of the theory.

As everybody knows, the Restricted Theory of Relativity has been devised to give an explanation of the negative result of Michelson and Morley's experiment in attempting to detect the absolute motion of the earth through the ether. A ray of light moving in a double path between two mirrors in the direction of the translation of the earth should have a longer duration than a ray of light traveling a similar double path in a perpendicular direction. And yet the Michelson-Morley experiment shows that the duration is the same in both cases. In order

** *Durée et simultanéité*, p. 241.

** Letter of Albert Einstein to André Metz, in *Revue de Philosophie*, 1924, p. 440. The objections made by physicists to Bergson's explanations seem to show a great difficulty in grasping the philosophical standpoint. The ambiguity lies in the word *reality*.

to account for this result, Lorentz put forward his hypothesis of the contraction of matter in the direction of its motion. Einstein adds to it the elongation or slackening of time and the relativity of simultaneity. According to him there cannot be a single and universal time, identical for everything, but several times and even an indefinite number of them flowing more or less rapidly, so that what is simultaneous for one may appear successive to another, and conversely, according to one's point of view.

Certain well-known consequences have been drawn from this theory by some of Einstein's followers, consequences through which the Theory of Relativity first became known in France, and they seem to be the only thing which many remember of it. For instance, the picture was drawn of an imaginary observer confined in the shell of a cannon shot from the earth at a velocity nearly as great as that of light. Were he to make the return voyage at the end of a year on a star traveling back at the same speed he would find the earth had aged two hundred years in his two years of absence.⁴⁰ Following the same line of thought, one could say that an observer traveling with the speed of light would never grow old, and that if he had, for instance, left the Battle of the Marne simultaneously with a luminous signal emanating from it, the Battle of the Marne would

⁴⁰ This hypothesis has been proposed by P. Langevin as "a quite correct development" of the Theory of Relativity, in his paper read to the Congress of Bologna in 1911 (*Revue de Métaphysique et de Morale*, 1911, p. 496); it has been used since by several physicists. It is through Langevin's paper that the Theory of Relativity has been known to France and that it first came to our knowledge. We were thus able to give an exposition of it at Lyons as early as 1911.

be for him in his travels, with its optical *image* for company, an ever-present *event*. Moreover, nothing even would prevent an admission, with Eddington, that if future events are really laid out in the flow of time, then one could, like Wells' traveler, explore the future as one explores the past.

Such conclusions are evidently improper and false and it is Bergson's merit to have clearly discovered that they are, and how and why. He remarks in substance that these conclusions, as well as the philosophical difficulties to which they give rise, all proceed from a continual confusion—which, perhaps, cannot be avoided by scientists lacking the philosophical cast of mind—between *reality* and its *image* or representative in the mind, between the *measured* and its *measurements*, in short, between the *original* and its *symbol*. There is on the one hand the thing measured, which is real in the particular case of time, it is the duration experienced by one's consciousness, because true time is the time lived through. On the other hand there is the representation of one's measurement by an observer on a system of reference moving relatively to him; or again, there is what is represented in one's mind as measured by a fictitious physicist relatively to which one would be moving. If one were supposed to be at the physicist's place, even then one could not see oneself but as a vision of the physicist, and it would be his own time which, as perceived by one, would become now the real time.⁴¹

Therefore in the Theory of Relativity we are not

⁴¹ *Durée et simultanéité*, pp. 96 et seq., 110, 138, and appendix to 2d ed., p. 272. Cf. Bergson's article on "*Temps réel et temps fictif*," in *Rev. de phil.*, 1924, pp. 241-60.

concerned with things, with real times which we may have experienced and lived, but with visions, with measurements, with "light-images"; and it is precisely these which differ. The real time is identical for the two observers; their light-lines occupy the same conscious duration. Such is, according to Bergson, the significance of Einstein's local times: they are effects of perspective. "The slackening of clocks as a result of their displacement, in the Theory of Relativity, is just as real as the shortening of things as a result of their being seen at a distance." Local times are a means of holding together in the same mathematical description of the universe phenomena belonging to different systems, just as perspective allows the artist to hold together on the same canvas persons and things placed at different distances. It would be as false to interpret the former as being really different as it would be to take distant persons for dwarfs. It is quite untrue then to say that Paul lives two years in the shell while Peter lives two hundred years on the earth; *it is not Paul himself but his image which lives two years; for him his shell is motionless and his consciousness, like Peter's, lives a period of two hundred years.*

Thus Bergson, according to the essence of his philosophical method—which is to search for the concrete reality, whether perceived or perceptible, to which each mathematical symbol corresponds—declares that if the symbol is referred to the reality it expresses instead of being set up as a reality, the paradox vanishes; and Einstein's thesis, far from contradicting, rather confirms the common-sense belief in a single and universal time. His plain

⁴⁴ *Ibid.* (2d ed.), p. 243.

opinion is that we possess no means of knowing whether there are different times in the universe, and that we should stick to the doctrine of common sense as long as nothing positive disproves it. But the Theory of Relativity does not disprove this doctrine. Einstein's multiple times are fictitious; they belong to systems which cannot be experienced, which cannot be measured, which cannot be explored, and were it possible for us to transfer ourselves there, they would become then everybody's time.

The real, the universal time, is the time of things, the pendulum which would scan the time of the universe where our own time is computed.* Besides it has its origin in the only duration we know immediately, that is to say, in our own duration, in the duration which constitutes our thinking, which indeed is memory, a memory internal to change itself, since it prolongs indefinitely the "before" into the "after." By means of an analogical inference, we gradually extend this duration to the entire universe conceived as a single whole.† This is how the idea of a duration of the universe arises. And as it is impossible to consider an enduring reality without calling for a consciousness, the universal time should be conceived together with a universal con-

* It suffices for this, says Bergson, to think of human consciousness disseminated through the universe, but sufficiently close to one another, so that any two of them being consecutive may have in common the extreme portion of their external experience. These consciousnesses, having the same rhythm of duration, live an identical time. The same reasoning may be applied to one consciousness after another; as nothing prevents us from eliminating the intermediaries laid down as relays by the movement of our thought, there will only remain an impersonal time—independent of our selves—where all things will flow (*Durée et simultanéité*, pp. 56-60. Cf. *Bulletin*, April 6, 1922, pp. 103 et seq.).

sciousness superior to the individual consciousness, of which it would be the connecting link. This universal consciousness would "discern in a single and instantaneous perception the multiple events scattered all over space." This conception, however, would not exclude the possible coexistence of different durations, i.e. of durations with different rhythms, perceived by memories diversely constructed, and enjoying more or less high tensions.

By proclaiming, in dealing with this exact point, the ruinous confusion between the real and its symbols; by discarding the conclusions arising from the translation of a mathematical symbolism into a transcendent reality and arrived at by using philosophically a method which should remain physical if not mathematical; and finally, by helping us to seize again, time in its original purity and its true reality, Bergson shows us the way to solve the biggest philosophical problems. The key to their solution, as he says indeed, is there. At bottom, why have men been so deeply interested in the Theory of Relativity? As has been said by a learned mathematician exempt, besides, from metaphysical prejudices, it is because "men hoped to find in it some light on God." Unfortunately scientists who ignore this norm ignore the limits and the true import of their science, and so unduly mix with it a kind of metaphysics which is unaware of its own implications. By separating science and metaphysics, the way is prepared for both a true science and a true metaphysics, the one completing the other. Science then supplies metaphysics with its material, which metaphysics in interpreting goes beyond in order to conduct us to the very threshold of the absolute.

3. We cannot pass judgment upon the whole Bergsonian conception of time, upon its implications and its consequences, because we have not yet all the requisite materials at hand. We shall be able to do so only when we have studied time in relation to life, evolution, and creation. To prevent all misunderstanding, let us merely note here that, if Bergson sees in psychological duration the 'true duration, that from which we must start in any case,' he does not reduce all duration to the limits set by the duration of our consciousness. For him there is a world-time. This time is not merely symbolical, and it only becomes illusory when we attempt to identify it with—and so impoverish—our own inner duration, which it measures; but although it has not the rich content of psychic duration, it is none the less something real, for in it can already be discerned the most fundamental trait of duration, which is *irreversibility*. Now when we leave the domain of crude matter and pass on to living and conscious beings, it is easy to perceive how this idea acquires greater precision and richer content. *Irreversibility* becomes *unforeseeability*; determinism relaxes its hold inch by inch, giving place to an increasing indeterminism, to real *contingency*, which is not the mere absence of determinism, but always "a positive asset, a victory (although an incomplete and precarious one) gained over inorganic matter by organization." Thus, too, an increasing amount of freedom is to be found inserting itself into the universe. Whilst physical causality implies that *nothing is created* in the interval separating two moments of time, and in the transition from the one to the other, freedom, i.e. psychic causality, implies the "*creation*, by the

very act, of something which was not in existence in its antecedents," at least in the actual form. True duration is not to be foreseen, because it is creative."

Such is, indeed, the essential characteristic of the free act as we perceive it in ourselves when we regain possession of ourselves. For our real self is not the one that is observed from without, but the one that is apprehended from within. That which constitutes my personality, forms the real me, is not my words or gestures or bearing, my "conscious automatism"; it is not that deposit in me which is brought in from outside. It is something invisible. It is a thought that I grasp when I want to withdraw into myself, when I am concentrated upon my own personality, a thought that you will not grasp unless you find it also within yourself. In short, it is the free will by means of which I install myself once more in the pure duration of my inner life.

But this free will is not mere spontaneity, as it has been thought to be. If life, which according to Bergson is probably coextensive with consciousness in our universe, introduces into it an increasing amount of indetermination and freedom, nevertheless, he adds, "from the lowest to the highest rung of the ladder of life, freedom is riveted in a chain which at most it succeeds in stretching. With man alone a sudden bound is made; the chain is broken." "Man alone is truly free. This amounts to saying that freedom in man can never return to the status of obvious spontaneity, and this not only

"*Bulletin*, Feb. 26, 1903, p. 102. The sense in which we may say that duration is "creative," that there is more in an act than in its antecedents, will be examined in detail when we are studying *Creative Evolution*.

"*Mind-Energy*, p. 26.

because "in man, the thinking being," the evolution which leads to a free act is a "reasonable evolution,"⁴⁶ but because there is in us a power which the animal world does not possess, a power of *effort* and *inhibition* inseparable from every free act, which frees us not only from external constraint but from inner necessity, and in a very positive sense *transcends duration*. The flowing, or the flowings, of consciousness urge us to action; the will remains master of the act. We ought not to say, "The act has been prepared and it 'goes off'"; but "I have prepared it and it 'goes off' because I will to have it do so." The human will does not give itself up to mere change and succession; it is not content with mere "*laisser-vivre*"; it can concentrate and make an effort;⁴⁷ it is like the indivisible *tension* of the bow, in which the movement of the arrow is contained.⁴⁸ And if we may say that in a certain sense duration is its substance, it is the sense in which duration itself is but the simple and indivisible relaxation of the indivisible tension which constitutes the self.

But what is this tension which is a constituent element of our freedom and our personality, and which, living in duration, makes our self transcend it to some extent, since it preserves, possesses, and dominates it? Why, moreover, does this tension always translate itself into extension? What is the reason why I must use gestures and words to express my thought? These signs are not my thought, for *that* is within. Why, however, is this invisible

⁴⁶ *Matter and Memory*, p. 243.

⁴⁷ *Mind-Energy*, p. 186 *et seq.*

⁴⁸ *Cf. Creative Evolution*, p. 309; *Time and Free Will*, p. 228.

accessible only through the visible? Why should I myself, a member of a world that is superior, be lodged within a world of matter? In short, why have I a body at all? Such is the twofold and unique problem to which Bergson addresses himself in *Matter and Memory*.

CHAPTER V

MATTER AND MEMORY. THE SPIRITUALITY OF THE SOUL ESTABLISHED BY POSITIVE METAPHYSICS

LET us briefly run over the conclusions to which the study of consciousness and of its immediate data have led us. The first is that our ego lives in duration, not in space; it is not the body. Nevertheless, we have a body, and not only have we a body, but—and this is the second point established—we do most of our thinking in the terms of space, as a function of the body. Hence a question arises in our minds: Why have we a body, and how does consciousness adjust itself to it? The reply to this fresh question will enable us to penetrate more deeply into the recesses of our own selves, and, if it does not solve the mystery of our being (for a true mystery is never cleared up save by suppressing some of its data), it will at least bring us face to face with it and show us exactly where it dwells.

But the meaning and the import of the answer can be comprehended only if the meaning and the bearing of the difficulty to which it is an answer have been carefully estimated. For this reason, before we begin to examine the solution, we must briefly recall the very terms of the problem, in

order to define them clearly and thus make sure of the direction our thought is to take.

An attempt has been made to detach the symbol from the ego in order to get into contact with the ego itself in its own duration. Now "what is duration within us? A qualitative multiplicity, with no likeness to number; an organic development which is yet not an increasing quantity; a pure heterogeneity within which there are no distinct qualities. In a word, the moments of inner duration are not external to one another."¹ Our psychic states interpenetrate each other; it is not such and such a sensation or such and such an image that urges forward my desire, and this desire in turn that moves my will, like so many distinct and dissociated physical forces reacting upon one another. Our inner states are within us "like living things, constantly *becoming*"; they go through a developing and organizing and blending together of themselves at the heart of the self which lives on and endures like them, of which they are the reflection and whose concrete individuality they express. In each of our states or our acts consciousness presents us with our ego; in each of them it recognizes itself as an invisible spiritual entity, ordained in time and not in space, and indivisible as the real time in which it is ordained; for our inner duration, as envisaged from the first to the last moment of our conscious life, is an indivisible unfolding; "when we try to cut through it, it is as if we were rapidly passing through a flame; all that we divide is the space occupied by it."² This duration is therefore

¹ *Time and Free Will*, p. 226.

² *Durée et simultanéité*, p. 63.

pure unity; it is, in some fashion, "all of a piece." And for this reason it is inseparable from *consciousness*, because consciousness is the only thing in the world that is one, simple, and indivisible. Thus consciousness and duration are so intimately associated that the one cannot be conceived without the other; the single duration in which we live implies the single consciousness of the reality which endures. But it is the same with all duration; in his ego every one comes into contact with a sample of humanity, because, according to Montaigne's words, "each one bears within him the complete pattern of the human quality," and in this humanity, contact with which is intuitively established within ourselves, we come in touch with something of the real.

Now let us look more closely at this reality which we apprehend within the depths of our own nature, when we have hushed all external sounds that we may listen undisturbed to the melody of our inner life. By a brand-new effort at fathoming, let us try to penetrate clear to the very heart of reality. This undivided and indivisible flux of consciousness is no doubt a unity, but it is a mobile unity, a moving unity; it is not the unity of a position, but of a progress; it is a continuity; it is the past incessantly bestriding the future upon the mobile point of the present. Properly speaking, we do not live in the present instant, because such an instant does not exist; what I call "my present" is, on the one hand, the immediate past, which is prolonging itself in me and upon which I lean even while contracting it, just as in presenting sensation of the color red during a single instant four hundred trillions of

vibrations are condensed which would require two hundred and fifty centuries to perceive individually; and on the other hand, it is the impending future that calls me, that is drawing me to itself, the future to which I am tending and in which I am prolonged, just as in a melody every note is leaning, so to speak, over the next one, or as in a harmonic sequence the discords prepare the way for the final concord which is to resolve them. Therefore the state we call the present is "both a perception of the immediate past and a determination of the immediate future."³ But what is that? For me to be able to retain the past and link it to the future; in short, that there may be duration, succession, and not simple instantaneousness, it is necessary that there be something in me which does not, like matter, perish every instant to be reborn the next. There must be a union or coupling between the before and the after, and hence, a memory. *The unity of our ego is a continuity in time; our consciousness is a memory.* "Without an elementary memory which links two instants together there would be only one or other of them, consequently a single instant, neither before, nor after, no succession, no time. . . . Duration therefore implies consciousness, and we put consciousness at the base of things by the very fact that we attribute to them a time that endures."⁴

Thus consciousness first of all means memory. Matter, said Leibnitz, is that which is entirely and at all times in the present; it is a momentary mind, lacking a memory; *omne corpus est mens momen-*

³ *Matter and Memory*, p. 177. Cf. *Mind-Energy*, pp. 8-9.

⁴ *Durée et simultanéité*, pp. 61-62.

tanea, seu carens recordatione. This really amounts to saying that this lack of a memory renders matter insensible. On that same account, also, its course is strictly determined. "To be in the present," writes Bergson, "and in a present which is always beginning again—this is the fundamental law of matter: herein consists *necessity*."*. And thus, since all consciousness is memory, differing in this respect from matter, all consciousness is anticipation of the future.

Now whoever speaks of mind speaks, above everything else, of consciousness. The mind then is the power of conserving the past and protracting it into the future, for the purpose of fashioning this future more and more profoundly. *Again, mind is memory, as it is freedom*, and it is freedom because it is memory. Freedom or partial indetermination can pertain only to beings capable of "freeing themselves from the rhythm of the flow of things,"* and of arranging what is to be, and of condensing its matter by a tension, more or less high, of their own duration. Thus by the rediscovery of the duration within us which flows from the past to the future, and by pondering upon this direct datum, we capture spirit by an insight that cannot err. To one who is capable of a like effort and a like insight, and thus able to retake possession of himself, it will be useless to prove by arguments the reality of the spirit, for he feels and lives and knows it; and he who knows a thing does not require any demonstration of it.

I am duration, I am consciousness, that is, mem-

* *Matter and Memory*, p. 279.

* *Ibid.*, p. 296.

ory and liberty; therefore I am essentially a spirit, that is, a being outside the bounds of space, having nothing to do with matter; a being freed of materiality and of all that, proceeding from matter or more precisely from extension, divides and subdivides. This is why, *to the extent to which I am free, I transcend duration itself*, or at any rate all that, in time or duration, has any share in division and subdivision, for they pertain only to matter.

Yes, but yet, when I thus descend into my inmost depths and through unadulterated consciousness regain possession of my own being in its original purity, I apprehend within myself a movement which does not stop short "within" my ego, nor is it sufficient unto itself, a movement traveling toward "without" and, to a certain extent, conditioned by "without." I even feel very clearly that from this movement I *cannot* free myself by any effort; even more, I feel more or less dimly that I ought not to free myself, under pain of truncating my nature and possibly of losing contact with reality, or with some portion of it. This power of concentration which is within me, and by which the degree of the intensity of my inner life is measured, is no doubt a quality, but a quality *tending* toward quantity; it is consciousness, no doubt, but it is a consciousness which *tends* to prolong itself in movement, and therefore to manifest itself in space; lastly, it is a thought, but a thought *tending* toward action and calling for a "without" in which to expand.

This point will become clearer still if we will examine not so much this power of concentration, but the way in which it is exercised. We never

find within ourselves an absolutely unadulterated consciousness, one wholly free of all links with matter: "Immediate intuition and discursive thought are one in concrete reality,"¹ as Bergson rightly observes. Nor do we conceive without images; every sign (and the concept is essentially a sign) is first of all suggestive of a course of action. Consequently, a concept is an expectation of images or a summary of images; it is every way associated with images which seek to bind the perceptual images in a new cover: "A conception is of value only for the perceptions in the background that it represents." For these images, with which the concept is associated, cannot exist in their turn without sensations that correspond, and there are no sensations lacking an element of extension in their origin; all sensations partake by nature of extension. This being so, thought under the compulsive power of development is bound by its very originating conditions to space, materiality, and to the body. There, it might be said, we have extension located in the very heart of the unextended.

Common observation verifies this fact and proves Bergson right. The most spiritual of all ideas, the idea of God, is in our minds inseparable from the very word God, *Theos*, *Dieu*, *Gott*, that is, from an image, be it motor, visual, or auditory, which the idea undoubtedly surpasses, but to which it remains attached. Only the mind most entirely freed from any element of sense, the mind of the mystic, succeeds, like St. Theresa, in suspending all its powers, notably the imagination, or rather it achieves such suspension, such complete detach-

¹ *Time and Free Will*, p. 237.

ment, such a "spiritual flight," the transport of the soul to its more elevated state of being, only in very rare circumstances and for a very short time. A feeling of profound humility warns the soul that such a transformation is not within man's power, but is a pure gift from "some being who is above us," and that such detachment from the body is prohibited to man acting merely in his own strength. The incapability sometimes shown in recovering afterwards the use of the understanding, memory, and imagination is possibly only due to the infirmity of our human nature. Now this very feeling, acknowledged by those who have best known and embodied pure thought, warns us that it is not man's destiny "to act the angel," that under normal conditions there is no consciousness present in us severed from matter, no conception apart from images, no memory not linked with motor articulation, nor *tension* without *extension*.

Man, then, is memory within matter. But there is more to be said; for this matter in which he dwells resurges upon his thought itself; by means of it he lives in the present, and "our present is the very materiality of our existence." Because it is linked to a body the soul is plunged into the corporeal world by it, that is, into a present continually vanishing, forgetful of the past and using it up. To the mind unentangled in matter, its past would always be present in its entirety, for the past is automatically preserved in the mind as is proved by the exceptional cases in which, when faced by death, a person sees his whole history rise up and unfold before him in a panoramic scene. "If we

* *Matter and Memory*, p. 178.

take into account the continuity of the inner life and, its consequent indivisibility, it is not recollection but oblivion that we have to reckon with." * According to Ravaisson's profound remark, quoted by Bergson, it is "materiality" that "begets oblivion" in us. We might say that *oblivion is the sign of materiality upon the mind, just as wear and tear is its sign upon the body*. Our soul forgets wholesale because, through the senses, it is a subordinate of the body; and this obliviousness which is an outcome of the actual conditions in which our thought is exercised is demanded also by its objective, for the soul has need of the body when it comes to act, and to be able to act in the present it must choose between its recollections. Thus, for us, the conscious is the present, poised for action; thus the consciousness, instead of being coextensive with our whole psychic life and embracing all the past history of the conscious personality in a perpetual present, undivided but infinitely pregnant, only throws light upon that part of it which is of use in responding to the immediately present call for action, which it solidifies into images and concepts with well-defined outlines—unlike the headlight which projects its crude glare upon the path to be followed, leaving all the rest in shadow. Finally, continually caught consequently between the sensation and the movement which constitute in practice our "present," everlastingly situated between the matter which acts upon us and matter upon which we act, consciousness in the end acquires certain habits in action, which are "the fundamental law of life," from its contact with matter. These find

* *Perception du changement* (Oxford Lectures, 1911), p. 31.

their way back in turn to the sphere of speculation, and profoundly modify our consciousness as far as its perceptive faculty is concerned, and even its very being; for—a more serious matter still—"the very mechanism by which we first explained our conduct to ourselves will end by controlling it."¹⁰ Hence arises that automatism which inserts itself into even our inmost life and disguises it to so great an extent, the automatism which Bergson denounced in *Time and Free Will*. Because the link is so close between mind and matter, between consciousness and the brain, many have been tempted to equate consciousness with the brain, and spirit with matter.

Thus is defined in its terms and its exact scope the twofold yet single problem which our being propounds to us ourselves—the "natural whole", composed of body and soul, as it used to be phrased, or the material expansion of psychic activity, as Bergson expresses it. In the presence of the facts which inner observation has revealed to us, it is now necessary (1) to discuss the theories which hold memory to be only a cerebral function, and then (2) to point out the exact relation of body to spirit; in other words, to discover in what sense and to what extent the soul and body are *distinct*, and in what sense and to what extent they are *united*.

Bergson's originality in the treatment of this problem is twofold—the method he uses and the way he applies it. They give the results he has obtained incomparable value, for they amount to

¹⁰ *Time and Free Will*, p. 237. Cf. *Matter and Memory*, *Introd.*, p. xvii.

no less than an entire renovation of one field of human research, and that certainly not the least important.

First, let us consider his originality of *method*. Integral experience is his method, both without and within; analysis illumined by intuition, but resolutely avoiding all theorizing.

The method of the *physiologists*, which pretends to be an experimental one, has only too often been a source of deception. What physiologists have really done most frequently is to limit themselves to a translation of phenomena ascertained by means of psychology, and known by consciousness alone, into the language of physiology. While this course seemed to them more satisfactory, more "scientific," really it is far less so, since it is much less clear and less certain. In this respect nothing is more instructive than the history of the various "diagrams" (*schémas*) by which physiologists have tried to represent cerebral processes, not only for movements and sensations, but also for images and ideation itself; the increasing multiplicity and complexity of these various schemes, or diagrams, as well as their diversity and fundamental contradictions, would suffice to show their futility, if other proof were wanting. It is useless, as Bergson says, "to disguise the hypothesis under cover of a language borrowed from anatomy and physiology"; it will none the less remain an unsupported hypothesis, a hypothesis of a metaphysical nature, "arising *a priori* out of a kind of metaphysical prepossession," which is materialistic and monistic, offering "neither the advantage of following the movement of consciousness nor that of simplifying the explanation of the facts." The

romance of the cerebral localizations of aphasia is an extraordinary case, worthy of the attention of a new Cervantes, because it presents us with a life history of a great error and turns informer upon the obstinate tendency of the scientific mind to convert its symbols into substitute realities and materialize everything it touches. What philosopher could ever have been induced to concede the evidence of cerebral localizations in the sense in which certain physiologists who were contemporary with Broca and Charcot understood them, that is, as compartments which contained all our images and all the relations possible between them. Such a conception housed its own enemy, self-contradiction. Nevertheless, these men of science, unprovided with culture and the philosophic mind, but not free of metaphysical and other prejudices, as Pierre Marie has shown, accepted without any discussion whatever and forthwith set up as a "scientific dogma" an enormous structure complete at all points, raised upon one little fact—not closely observed, moreover. And this one pseudo-fact was accepted without confirmation, because it confirmed the theses of Bouillaud which were then the fashion. Forty-five years after the famous "observation" made by Broca in 1861, someone took it into his head to reexamine the two brains of the aphasics in the Dupuytren Museum upon which he had "demonstrated" the lesion of the third frontal convolution of the left cerebral lobe, and it was found—a thing which seems scarcely credible—first of all that these two brains had never been dissected, and then that their frontal lobes bore the marks of many other lesions besides that of the third frontal one (notably in all the zone to be found behind the Rolandic furrow).

Until 1906 nobody had ever thought of getting at the facts; the structure of the theory with all the complicated paraphernalia of its imaginary schemas, which were so absolutely artificial, moreover, was so imposing that no one dared touch it or call it in question. When Bergson first laid a hand upon it in 1897, physicians treated his action as a non-sensical move, even as "pure madness."¹¹ Then well-known physiologists and clinical consultants, prominent among whom was Pierre Marie,¹² who undertook to revise the data upon which the theory rested discovered that these data were either non-existent or badly interpreted, and indeed that most of them were pure imagination. With close and acute observation they demonstrated that aphasia was possible without any lesion of Broca's center, and *vice versa*,¹³ and that if we can make out

¹¹ Nevertheless Prof. Arnold Pick, director of the neuro-psychiatric clinic in Prague, had noted in 1897 the scientific value of Bergson's ideas about aphasia. His opinion, however, stood alone. More recently, Von Monakow, director of the Institute of Cerebral Anatomy in Zürich, told Dr. Mourgue that Bergson must be a "neurologist of genius," since he had discerned the truth about aphasia from examining documents which distorted the reality. See the very interesting article by Mourgue on "*Le point de vue neuro-biologique dans l'œuvre de M. Bergson et les données actuelles de la science*" (*Revue de Métaphysique et de Morale*, pp. 27 et seq.). Its author has done much to make Bergson's ideas known among neurologists, but it takes some time for specialists to assimilate such new ideas.

¹² On this subject see Dr. François Moutier's book, *L'aphasie de Broca* (Paris, Steinheil, 1908).

¹³ Pierre Marie, observing 108 cases of aphasia with local injuries, found only 19 cases favoring localization in F3, 37 aphasias without any lesions in that center, and 27 lesions without corresponding aphasia. Since that time, research like that of Von Monakow at Zurich has confirmed and even gone beyond Bergson's criticisms, and made it plain not only that there is no "strict localization" for aphasia, nor even for the complex movements of the upper limbs.

roughly a general motor center, sensory centers, and language centers, but not at all precisely, there are no "psychic centers," and we must say good-bye to all cortical localization, not only of thought but also of ideas. Thus, of all that famous theory which for fifty years succeeded in passing as "scientific," it may be said that nothing remains to-day save the history of a tremendous hoax, of which the authors were the first dupes.

Shall we, however, like certain of the *spiritualistic* school, proclaim the futility of all methods of anatomical, physiological, and clinical research, and content ourselves with meeting the materialistic theses with an assertion of the essential simplicity and spirituality of the mind, with respect to its higher and characteristic faculties—understanding, reason, creative imagination—as consciousness reveals them to us? In retiring to these intrenchments as to a fortress, spiritualism, says Bergson, committed a double error: it appeared *arbitrary*, and it was *sterile*.

It appeared arbitrary, for "its opponents could always object that the deviation between the psychological and the physical established by it depended solely upon its considering matter in its most elementary forms, and spirit in its most advanced states,"¹⁴ that it was easy enough for spiritualists to proclaim the irreducibility of thought and of movement after they had ignored all the intermediate states, in order to take into account the two

¹⁴ See in *Bulletin*, May 2, 1901, Bergson's report on "*Le parallélisme psycho-physique et la métaphysique positive*," p. 66.

extremes of the series only. But, the materialist would say, if you take matter at its point of greatest complexity and mobility, at which it imitates consciousness, and consciousness at that degree of simplicity and stability at which it enters into partnership with matter, then you will see they are getting closer and closer in such a way that in the end they will coincide, and you will have reestablished the continuity which exists all along the line from the lower to the higher forms, from matter to thought, without any cleavage.

While appearing arbitrary, the spiritualism of old was necessarily sterile, and to some extent it deserved the disdain shown it by many scientists; in substance, it confined itself to matching one extreme position with another, and to declaring thought irreducible to matter. "Now a declaration of this kind may be true," says Bergson, "(in my opinion it is true), but there is nothing more to be got out of it than out of the contrary assertion. In philosophy the *yes* and *no* are sterile. What is interesting, instructive, and pregnant is *to what extent?*" In what degree is thought independent of the brain? This is the thing that matters, and this is what we want to know, because to answer this question it is necessary to consult experience and facts, and to station ourselves at the point of contact where these two concepts touch and interpenetrate. Because the reply to this question will tell us not only *if* these concepts are contradictory, *if* these realities are distinct, but *how*, and perhaps *why*, the two terms are irreducible. Assuredly this

demands of the philosopher, as of the scientist, long, difficult, and even painful effort; but this effort is indispensable in the case of everyone who desires to know reality and not to construct it according to his own fancy, as so many philosophers and scientists do; and it is still more indispensable to the man who is not content with "possessing the truth," but who desires "to convert others to the truth."

These requirements dictated to Bergson his own method and determined its point of application. To him it seemed, as he tells us, "that there was only one way to overthrow monism, and that was by attacking it in its own domain," and selecting from among all the known facts those which seemed most favorable to the theory of parallelism. If the facts undermined the theory in cases where, at first sight, they ought to confirm it, they ought even more convincingly to undermine it elsewhere. Strong in the strength of the incontestable data derived from his inner observation, and in the testimony of a consciousness restored to its own destined end and original purity, Bergson then went resolutely to work. He consulted experience; he gave himself up to a minute analysis of the facts in his effort to pounce upon mind and matter at their point of contact, which the materialists proclaimed would show an identity or exact parallelism, while his consciousness affirmed that the two were both radically different and in close correspondence. Bergson has told us in words never to be forgotten *how* he set to work, and the page deserves quoting in its entirety, because it conveys to us the secret

of one of the greatest discoveries of the human mind.¹⁵

"First of all I looked the manifestations of matter in the face, not in their simplest form, that is, in physical phenomena, but in their most complex form, physiological phenomena, and it was not general physiological phenomena that I selected, but the cerebral manifestation: Not this in general, either, but a certain well-defined and localized manifestation—that which conditions a certain verbal function. Thus from complexity to complexity I ascended to the point in which material activity rubs shoulders with mental activity. Then, proceeding from simplification to simplification, I made the mind descend as close as I could to matter. I neglected ideas to consider images alone, and of the images I retained only recollections,¹⁶ of recollections in general, only the recollections of words, and of these only the very special memories we retain of the sound of the words. I had now reached the very frontier and was *almost* in touch with the cerebral state in which sound-vibrations prolong themselves. Nevertheless there was a deviation. It is true that it was no longer the abstract deviation which may *a priori* be asserted between two concepts such as those of consciousness and movement. From the mutual exclusion of two concepts, I repeat, no conclusion can be drawn. It was a concrete and living relation. I saw, at the very moment when the state

¹⁵ *Ibid.*, pp. 48-49.

¹⁶ Which means that of images Bergson retains those which are bound up with a memory, but not by any means that the memory is only a sort of image; he very clearly brought out the difference in kind that separates them.

of consciousness is duplicated by a cerebral concomitant, why and how it was that the mind needs to develop by movement in space all that there is of possible action in it, all it has that is *jouable*. I saw too, in the psychological phenomenon which is super-added to the cerebral activity, something in part free and in part indeterminate, the part of this phenomenon which is *jouable* being strictly determined by its physical conditions, whilst the image part or representation of the same phenomenon was much more independent.¹⁷ Aside from this I was finally able to perceive the possibility of determining, empirically and progressively, what I have called the 'significance of life,' that is, the real sense of the difference between soul and body, as well as the reason for their union and collaboration. . . . Thus, by restricting spiritualism to this extremely narrow domain, it seemed to me that its fertility and its force might be increased indefinitely . . . in fact, of all doctrines it might be made the most empiric in method and the most metaphysical in results."

The fruit of this research and the product of this method is *Matter and Memory*. No attempt will be made here to sum up this great book; all that can be done is to send the reader to it. It is true that the book presents serious difficulties of interpretation. Even, with the light thrown upon it by the preface to the seventh edition, and by the clear and comprehensive lecture upon "The Soul

¹⁷ As a matter of fact, in *Matter and Memory* (pp. 171, 173-74), Bergson proves that the "image" part is *slightly less dependent* upon the body, and that the "representation" part is, as far as its existence is concerned, *entirely independent* of it.

and Body" in *Mind-Energy*,¹⁸ there are many parts of it, and even much of its general trend, that are not easy to grasp. The fresh and attractive style of the *Essai sur les données immédiates de la conscience* is not found there, nor the epic inspiration running through the *Evolution créatrice*. Its first chapter is somewhat of a surprise; it is not very closely connected with the second, which, in my opinion, is the real beginning of the book. The fourth, pregnant with fertile intuitions, contains also some debatable views, notably upon the continuity of matter, which recent scientific developments have not confirmed although they have not overthrown them. In spite of, or making allowance for all this, *Matter and Memory* is the receptacle of a formidable intuition, a fact of unexampled simplicity and significance, a something which is comparable only with an explosive; for it contains within it enough to shatter into fragments a whole false science and lay bare the rock upon which, as upon an impregnable base, metaphysics can enthrone a rational belief in the spirit, and in the immortal destiny of man.

Let us follow step by step the development of Bergsonian intuition right up to the fact which served him as a touchstone, and the significance which that intuition extracted from it.

After Bergson undertook to lay hold of the physical and the moral at their point of contact, and attempted to give a definite answer to the question he had asked himself, he soon found himself obliged by the very facts them-

¹⁸ Pp. 37-74.

selves to restrict his researches to the problem of memory.

The *problem of memory* is not merely one of capital importance; it is also "a privileged problem." In it, in fact, the two opposing theories confront each other in a perfectly clean-cut way that enables experience to cast a deciding vote. If we are dealing with perception, the experimental test of the two theories is impossible, because a perception is the representation of an object present, a body affecting our body, and is always and necessarily accompanied by a physiological concomitant which it is difficult to establish is not its cause. But it is quite otherwise with memory, for a recollection is the representation of an object present and the two hypotheses here yield contradictory results. In fact, if in the case of an object present a cerebral activity is sufficient to create perception, it would even more surely be sufficient for perception to repeat itself in a feebler degree in the absence of the object. Hence it will be right to conclude that *memory is only a function of the brain, and there is only a difference of intensity between perception and recollection*. If, on the contrary, the cerebral state only actualizes perception, it can only protract the recollection, not produce it, and it ought then to be possible for us to find the recollection in its pure state, a recollection wholly subjective, wholly mental, and hence differing entirely from perception, which is always concerned with an external object present and actually existent, with which it makes us get into touch by a direct intuition that gives us, if not the whole, at least the

essential part of the matter.¹⁹ Hence we draw up this double thesis, which is the reverse of the former: *Memory is something other than a function of the brain, and there is not merely a difference of degree, but of kind, between perception and recollection.* On this basis memory would be nothing other than mind intercalating past with present, and contracting into a single intuition many moments of duration. Thus would be introduced within us something which differs radically from perception; the brain, moreover, would become an instrument of action, not of representation; it would transmit movements and be incapable of engendering representations; it would intervene only in the ultimate "plane of consciousness," the one interested in action.²⁰ In this way a position called *spiritualistic realism* might be defined, affirming on the one hand the existence of reality intuitively per-

¹⁹ From this it follows, observes Bergson (*Matter and Memory*, pp. 78-81), that in matter there is something more than, but not something different from, that which is actually given in perception. All materialism is thus refuted, since every mysterious or hidden power which is inaccessible to sense as to consciousness is eliminated from matter, and this proves to be exactly what it appears to be. Matter may have unknown physical properties, but these will be physical only. This main contention, which is established in the first and fourth chapters, is intimately connected with the theory of memory expounded throughout the rest of the book, constituting its actual proof, namely, that matter, regarded in its highest point, the nervous system, serves solely to receive, inhibit, or transmit movement, but is incapable of producing or even preserving thought. Here we may say that we have the governing idea of the book, which constitutes its immense scientific and metaphysical value.

²⁰ The conception of the "planes of consciousness," and the plane upon which the body intervenes, as we find it developed in Chapter III, was, as Bergson has told us in the preface to the first edition, the starting-point of his work.

ceived outside ourselves, and on the other hand the existence in us of the purely mental. It would maintain this position against *materialistic idealism*, which in truth reduces perception outside us, like recollection within us, to the status of a mere effect and conscious duplicate of a cerebral process. It would be a realism, moreover, very different from the customary forms of realism, in that it stations itself at the point of contact between objects and ourselves, inside the direct datum in which perception and recollection, matter and spirit, present and past, unite and act together.

Between these two positions, the choice is not personal preference or mere matter of speculation. The very definite point upon which they diverge can be subjected to examination and verification by experience. According as the exact cerebral equivalent of recollection is found or not, the one or other will be excluded. But how are we to go about this verification, and on which point shall we direct the attempt? Bergson was led to limit the question still further. After having reduced the problem from the relations between body and soul to the problem of memory, he found this smaller problem still too wide to allow him to arrive at a precise solution. So he restricted it still further, as we have seen, to the memory of words, then to that of their sounds. He devoted five years to a study of all that had been written about aphasia; he confronted the facts thus gained with an immense number of other facts derived from psychology, normal or pathological. By following *converging lines of facts* in the direction which they naturally led the mind, he was carried along by the cumulative force of

manifold probabilities, toward a truth apparently situated at the intersection of these lines of facts, and determined even by their convergence."¹ By suggesting the exact significance of the facts, this accumulated evidence provided the problem with "an approximate solution, one capable of still closer approximation, and finally a scientific solution."

The main feature of this solution must now be sketched. This will be done not by reviewing the whole of Bergson's subtle and complex argumentation, but by choosing some definite examples which will bring out its essential simplicity and richness of content.

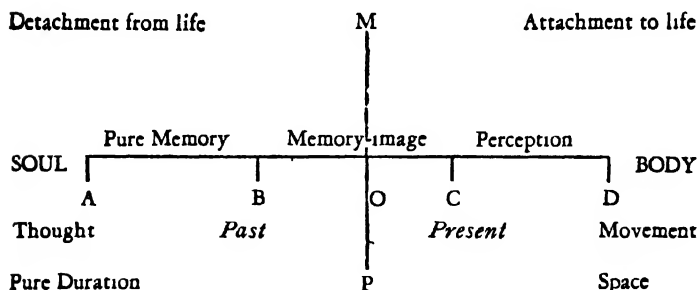
Let us take, as he himself invites us to do, matter and mind at their joining point; let it be, for instance, *the image of a verbal sound*. When I repeat a word to myself, inwardly, without articulating it aloud, without even first roughly outlining its articulation, does this image belong to the body or the soul?

I listen to a melody; it strikes upon my ear, I perceive it, possibly repeat it, at any rate I sketch its rhythm. When it ceases, the melody continues to sing within me, perhaps to vibrate. I now have the image of it; possibly the rhythm goes on interpreting itself in my breathing or my gestures. The image ceases; I forget it. I am drawn aside from it by external perceptions. Later on some incident

¹ This method, which Bergson defines in passing (*Vide Bulletin*, 1907, pp. 53-54) and which he has so aptly applied, is the very method of science and of all rational thought, as Newman and Cournot have well shown, as well as Pascal before them. (See the Author's *Pascal*, p. 202, and his essay, "*Sur la methode de connaître d'après Pascal*," *Revue de Métaphysique et de Morale*, 1923, pp. 201 et seq.)

causes the recollection of it to surge up within me, and this recollection tends to evoke the image of the melody, to reproduce it in movements which will give me back a perception of it and make it present to me once more. Where does matter end; where does mind begin?

Let us stake out upon a line, the course described in proceeding from perception to memory.^u Between the two poles of movement and immaterialized thought, of body and soul, that course will run through a whole gamut, of intermediary stages continuous like the colors of the spectrum. Symbolizing the three terms—pure memory, memory-image, perception—by three segments AB, BC, CD, on the straight line AD, we may say that thought describes this line in one continuous movement.



The capital error made by associationism is its separation of these terms, as if they were things, and its introduction of a surface fissure MP, which is supposed to divide the psychical life into two elements, sensations on the one hand (represented by the segment OD, ending in sensation), and

images on the other (represented by the segment AO, ending in images). But—and on this point we carry Bergson's thought a step further, without, we believe, betraying it—what associationism, like all doctrines based on observation from the standpoint of quantity only, did not perceive is that in the continuous passage from immaterialized thought to movement there is some portion like to a crevasse in a glacier, coated over with snow but of great depth. That fissure occurs at the point of contact of recollection and image. *Between the recollection and the image there is a continuity on the surface and a cleavage of great depth below:* "no doubt a recollection, as it becomes actual, tends to live in an image," but "to picture is not to remember," says Bergson, and "the image, pure and simple, will not be referred to the past, unless, indeed, it was in the past that I sought it. . . . Memory, then, is something quite different."²²

Bergson at once proceeds to throw light upon this double point:

(1) *The past survives under two distinct forms: first, in motor mechanisms; secondly, in independent recollections.*

(2) *We pass, by imperceptible stages, from recollections strung out along the course of time to the movements which indicate their nascent or possible action in space. Lesions of the brain may affect these movements, but not these recollections."*

I set out to study a lesson, and, to learn it by heart, I read it closely word for word; I say it over

²² *Matter and Memory*, pp. 173-74.

²³ *Ibid.*, pp. 87 et seq.

to myself and repeat it a number of times, until the words which have become more and more linked together through the repetition at last form one continuous whole, and at that precise moment I can say that I know my lesson by heart, that its image is imprinted upon my memory.

But when I try to picture to myself how the lesson has been learnt, I shall recall every one of the successive readings with its own individual features; I shall evoke the circumstances which accompanied each of these readings and differentiated it from the preceding and the following by the very place which it occupied in time, the circumstances which make it a definite event in my history; I may evoke the memory, for instance, of a friend who perhaps arrived at a particular moment during the reading. As before, we may say that this image is imprinted on my memory. We use the same words in the two cases, observes Bergson. Do they mean the same thing? Evidently not.

The memory of the lesson learnt has *all* the characteristic marks of a habit. Like a habit, it is acquired by the repetition of the same effort, of the same complete action, which is first decomposed and then recomposed; like a habit, it is stored up in mechanism, or, rather, in a system of movements which recalls it by repeating and unfolding it afresh in a fixed order and a definite time. The memory of the event, on the other hand, has *none* of the marks of a habit; it is registered within my mind at a single stroke; the event it preserves and makes live again is a unique fact, bearing a date in time, but not requiring a definite period of time for the

occurrence," since the event itself is incapable of repetition. I can indeed repeat my lesson, or imagine it, by reproducing exactly all the voice movements required for its articulation. But the lesson thus repeated is no longer the one I learnt, or rather, the self that repeats it is no longer exactly the same self that learnt it. Between the two transactions—how shall I put it?—I have grown older; we are born, and we die, only once!

The first memory is *action*—it acts out our past, bringing it before us as if *present*; the second is pure *representation*—it *evokes* the past, *perceiving* it in doing so as *past*. The first is the memory of the body; the second, the memory of the soul.

I have frequently practiced certain organ solos, in order to have them at the tips of my fingers; that is corporeal memory. But to a select few of these pieces a particular date is attached, and this date evokes in my mind a certain very special combination of circumstances in which I enjoyed a secret harmony and a unique state of mind which will never recur; this we may call a "spiritual" memory, for it seems to have no need of aught save mind. The other, however, needs the body, and even the "spiritual" memory cannot be articulated or actualized save by the medium of the body, although, in its pure state, it is independent of it.

Everything that comes to pass makes it seem, then, as if there were in us two entirely different forms of memory—a habit-memory, with its abode

"Here we have a double phenomenon which throws searching light upon the nature of that which we call "time." Vide also *Mind-Energy*, pp. 91 *et seq.*

in the body; and a pure memory, independent of the body. And everything that occurs, occurs as if the brain, the organ of movement, served the purpose of recall, but not of memory. Let us see how this double phenomenon may be solidly established.

Beyond doubt experience in its crudest state tells us that there is no apparent connection between the immediate data of consciousness and the small mass of soft matter which is the brain. Further still, a little reflection will apparently suffice to show the absurdity of a hypothesis forced to deposit in the cervical substance as many auditory images of a word as the number of times we have heard it uttered by voices of different pitch and varying tones, because the brain can register no more than the material sounds; it cannot register their significance. Finally, as Bergson has so forcibly demonstrated," the idea of an equivalence or a parallelism between a psychic state and its cerebral correspondent is a philosophical illusion arising out of a certain brand of metaphysics involved in a number of extremely doubtful metaphysical postulates, and in itself contradictory, since it rests upon an ambiguity in terms and cannot be correctly stated without crumbling to pieces.

But these arguments are not yet wholly convincing. To be able to believe in the "spirituality" of memory, there is need of decisive, irrefutable proof which will establish the fact that memory is preserved not in the brain but in the mind. Now the difficulty in the way of this proof lies in the fact that it is impossible to ascertain the presence of a memory within the ego in the absence of the

" *Vide Mind-Energy*, pp. 231 et seq. Cf. p. 48.

movements of articulation by which this memory presents itself. Mutilate or suppress the body and the movements of articulation of which it is the seat, and everything that goes on seems to occur as if memory itself were abolished. From this point to the conclusion that the memory is in the brain is but one step.

Nevertheless proofs exist, and they are irrefutable, that there is a continuous existence of memories which nothing betrays externally. These proofs are based upon the two great methods employed by science—the method of variation and the method of difference.”

1. If memories were really stored up in the cortical cells, these memories, in a case of progressive aphasia, would be attacked in a different succession, corresponding to the order followed by the lesion. Now nothing of this kind takes place. In *progressive aphasia*, following upon general paralysis, senile decay, etc., for instance, in the majority of cases the disappearance of the words follows a grammatical order, the very one indicated in the law of Ribot. Proper names suffer eclipse first, then common nouns, then adjectives, and lastly verbs and interjections. Now it is quite absurd to suppose that the lesion, no matter where it may have attacked the brain, and no matter what direction it follows, always runs, as if by accident, upon the

“We show that a phenomenon A is the cause of a phenomenon B if, on destroying A, we find that B is also suppressed (the method of difference), or if A varies and B varies in the same ratio (the method of variation). If, on the contrary, recollection is not abolished when its cerebral fulcrum is suppressed, it is evident that the brain is not the cause of the recollection.

same images disposed in the same order. . If we assume memories to be stored up in the brain cells, everything is inexplicable, but, on the contrary, if the admission be made that the brain is merely the organ of recall, everything can be accounted for. Then, when the brain is injured, we can understand that the faculty of recall would be impaired in vitality, and those images most difficult to recall, those requiring the greatest motor effort to be actualized (like proper names); would first suffer eclipse, the rest disappearing by degrees in proportion as the brain weakens and its power gives way, the verbs being the last to go because they express action directly performable by the body. As a muscle which is becoming atrophied can lift only continually decreasing weights, so a weakening brain can no longer evoke any words except those which demand a modicum of motor effort.

This explains how even in cases where a disease may be assigned a fairly constant seat in a special convolution of the brain (as in a disturbance of the auditory or visual recognition), its effects appear, not as a mechanical and well-defined destruction of recollections belonging to a certain period, but rather as the gradual functional enfeeblement of the memory concerned. This proves that it is not the recollections themselves that the disease affects, but the cerebral mechanism by which they are recalled."

2. The "method of difference affords, if not

"Recent observations have proved, moreover, that under the influence of an emotional state an anarthric aphasic can very easily recall the words he could not pronounce a few moments previously, and with these words the ideas and recollections connected with them for the purpose of articulation.

stronger, at any rate more striking proof. May I be allowed to relate here a fact which proved very illuminating to me, although since its occurrence the War has provided many similar instances—even more significant ones—which very notably confirm Bergson's views on the subject.

A workman in the St. Jacques factory at Montluçon, whilst engaged in making crowbars with the rammer, was struck by one of the wedges used to give the bar the right curve. It flew off at a tangent and came back with an unforeseen ricochet, striking him with terrific force behind his protecting shield. Part of his skull was shattered and a large quantity of cerebral matter carried away with it. Under the influence of the shock the man lost all consciousness, power of movement, and memory, and remained in a state of coma for many weeks. He had to be fed artificially all that time and for some weeks after. Then by degrees he recovered the use of his limbs; he began to walk, though round and round at first; he learned to feed himself and to talk once more; finally he made a complete recovery." It was then ascertained that he had lost none of his memories except (a very natural thing) the recollection of his accident, which had not had time to integrate itself with his mind. Now if memories were stored up in the brain, what would have been found? The absence of a certain collection of memories, viz. those situated in the cervical region attacked, whatever they were, which would have been destroyed by the traumatism. As a matter of fact, a man can easily learn to use his limbs again, to walk, speak, read, write, in short, to perform any movement

"He lived for about twenty years after this.

retained in the habit memory; he can also learn once more a science he has forgotten, but *he cannot learn his memories over again*, for memories, which belong to the past, if once lost, are lost forever. Here we touch the quick and grasp a whole world of difference between the two memories, the one which *acts* over the past as present, and the one which *perceives* the past. The first can be educated and reeducated, the other not. If they had once vanished, we could never recover the recollections of our seven-year-old life, for our consciousness when normal does not confuse the memories we have retained of past events in our conscious life with the tales, for instance, that our parents have told us of our early childhood. There is a radical difference between the two. *If recollection, then, were stored up in the brain, the loss of any portion of the cerebral region would entail the corresponding loss of certain recollections: and this is not the case.* What remains to be said? The conclusion forced upon us is that after the traumatism which had deprived the wounded man of a part of his cerebral substance, all his memories remained intact; the capacity to recall them alone was missing. The recollections were there, but they could not be evoked, since the threads to which they were attached, if I may express it thus, were now lacking. Once the threads were restored and the motor mechanism reconstituted, the patient recovered all his memories."²

² In the course of the War there were more opportunities of observing other cases no less characteristic, and still more extraordinary, for they indicate not only that a *conception* is independent of the brain, but that its execution depends less directly upon it than is generally believed. A soldier, a native of Le

We must conclude, then, with Bergson, that "there is not, there cannot be in the brain a region in which memories congeal and accumulate. The alleged destruction of memories by an injury to the brain is but a break in the continuous progress by which they actualize themselves."³⁰ "That is, by suppressing the last phase of the realization of a memory—the phase of action—they would thereby hinder the memory from becoming actual."³¹ Here again, the recollections are intact, but they are powerless, incapable of utterance.

But, it may be asked, if recollections are not preserved in the brain—if the body is the condition of their actualization only, and not of their existence—where *are* they preserved?

Such a question is meaningless, or, rather, it arises from a confusion only too easily explicable, but by no means warranted, the confusion between *existing*, Brethon in Allier, who had been brought to the Montluçon ambulance station, had had part of his skull at the base of the left parietal carried away by a shell. The brain was ruptured; it mortified, and about one-fifth of its substance was removed. The man lived thus for rather more than two months, almost without suffering and without showing any diminution of his cerebral or motor faculties, any disturbance of judgment or reasoning power, any change of memory. He talked in a normal way and wrote several times to his family; then he was suddenly overcome by coma and died within forty-eight hours. Some of the brains of those severely wounded resembled the hollow old oaks in which a thin layer of sapwood alone permits the sap to circulate. . . . These instances do not pretend in any way to be complete observations, and they would not suffice for the study of cortical lesions in their manifold conditions and effects (for that would require a series of experiments in neuraxia), but they are enough to show that Bergson's theory is supported by definite and incontestable facts and to warrant the conclusions we shall draw from them.

³⁰ *Matter and Memory*, p. 160.

³¹ *Ibid.*, p. 120.

and *existing somewhere*. Accustomed as we are to busy ourselves with matter, that is, visible and tangible things, when anyone speaks about a thing, we are naturally inclined to ask, Where is it? since, for that kind of thing, *to be* means *to be located somewhere*. But there are other realities possessed of the property that they *cannot be located anywhere*. Shall we ask the mathematician where "proportion" is? Or the judge where "justice" resides? Both will tell us that the idea of proportion, or of justice, certainly exists, but they will tell us, too, that proportion does not exist on the blackboard where the first writes 2:4::4:8, or justice in the sentence pronounced by the judge in conformity with the code and with equity. The peculiarity of these things is to be, but not to be located in any place. This may appear to be difficult to grant, but none the less it cannot be denied. One day I was discussing with a well-known doctor the case of the wounded Montluçon man, and I asked him exactly *where*, in his opinion, memories are preserved, since, according to the views held by him, they must be preserved in matter. They could not have been in the brain cells or they would have disappeared with them. This doctor answered, "Well, let us say that they are preserved in a fourth dimension of the brain." Let him think so if he likes, but this hypothetical fourth dimension, of which we know absolutely nothing, it is much more simple and scientific to designate *mind*; for of mind at any rate we have through consciousness an immediate apprehension. Let us say, if it is more acceptable, only in a purely metaphorical sense, that "memories are

in the mind." Or more precisely still, they are preserved in time; they are preserved in *my past*, even when I am not thinking about them, just as external objects are preserved in space, even when I am not perceiving them. It is the body which draws them from my past when I need their assistance in my course of action, but it is evident that "the mind overflows the brain on all sides, and that cerebral activity reciprocates a very small part only of mental activity." **

One thing is certain. Memories, however they may be preserved, are not preserved in the brain; nor, more generally speaking, in matter.

3. One little fact within reach of everyone, a fact supplied by introspection (the only direct cognition) confirms—and in a singularly convincing way—the data of pathology. In a moment of brain fatigue, I start searching for a friend's name; it escapes me. Nevertheless it is on the tip of my tongue. I see the form of the word, perhaps I already have stumbled upon its initial letter, and I try to pronounce it. Perhaps by these efforts and this kind of "mimicry," I shall succeed in getting hold of it; perhaps not. But as soon as it does come back to me, or as someone names it, I say at once, "That's it." I have *recognized it*.

What conclusion are we to draw from this episode? Some say indifferently, "I do not remember it," or, "I cannot call it to mind," by a confusion of terms which they are unable to differentiate. The correct thing to say is: "I remember it, because

** *Mind-Energy*, p. 71. Cf. *Matter and Memory*, pp. 181 *et seq.* *Bulletin*, Nov. 15, 1909, "On the Unconscious," p. 33.

I recognized it directly and without any effort on its return. I had forgotten it, or rather, my apparatus of recall was unable to summon it."

Do you want to see this situation take on a tragic aspect? "After his attack," writes Théophile Gautier, "Baudelaire lived for several months unable to speak or write, for paralysis had ruptured the links which bind thought to speech. Thought was still alive in him; this could be seen by the expression of the eyes, but it was a prisoner condemned in silence, without any means of communicating with the outside world, in a cell of clay which would open only for the tomb."

I myself had opportunities, extending over many months, of discussing metaphysical and historical questions of a highly technical nature with a man of remarkable intelligence and great culture who had entirely lost the power of speech as the result of a cerebral hemorrhage. His only way of expressing himself was by affirmative or negative gestures. With great pains, however, we got to the point of understanding his questions. He understood my answers perfectly, and he put his finger on the questionable spot of the point under debate with incredible accuracy and penetration. Now, this man, who used not to believe in the soul, came to believe in his own soul when I induced him to reflect upon his condition. He understood, he "realized" the insurmountable barrier which exists between thought and brain, when at last he ascertained the coexistence within his own soul of thought which was unimpaired with a brain that refused all service.

Let us adopt the conclusion of Bergson: "Things

happen much more as if the brain served to *recall* the recollection, and not to store it." ** This is borne out by the facts. It is the body that forgets and recalls and the mind that preserves, and the mind, too, that recognizes.

There is, indeed, an automatic and instantaneous form of recognition, of which the body alone is capable, without the intervention of any explicit recollection. This recognition consists in action, not representation. It is experienced by the man who is taking a walk in a town with which he is familiar, or (a still better example) by the dog which receives its master by joyful barks and demonstrative lickings of its tongue. Undoubtedly the dog recognizes him. But is this recognition accompanied by a perception of the past *as such*? It is very doubtful. It is lived rather than thought, and it is entirely of the present. Its recognition is a recognition of the body. But true recognition is something quite different. It goes from within outward, from the center to the periphery, from the idea to the perception, thanks to an effort of attention, and due to a more or less high degree of tension in consciousness, which is on the search for pure recollections in memory, that it may progressively develop them into a motor scheme, and then into images designed to clothe and interpret the crude perception. To follow a calculation is to do it over again for oneself; to understand the words of others is to reconstruct intelligently, starting with the corresponding ideas, the continuity of the sounds perceived by the ear. Thus is realized the intention which we choose to call "pure memory." In this way it is actualized and recalled.

** *Mind-Energy*, p. 65.

And, once recalled, *it is immediately recognized as such by the mind.*

At any rate the very study of the process of recognition shows us that in normal conditions pure memory or memory of the soul does not suffice; it is potential and intentional, but it is not actually existent and realized. For it to be realized the body is necessary. We might adopt and apply to our present problem a page from Plotinus, quoted by Bergson, in order to explain how the connection between memory and sensation is effected in dreams. "Nature," says the Neo-Platonist philosopher, "sketches living bodies, but only sketches them. . . . On the other hand, souls dwell in the world of the Ideas . . . above time and outside space. But among bodies there are some which by their form respond more than others to the aspirations of certain souls. And among souls there are some which find their own likeness, so to speak, in certain bodies. The body . . . rises toward the soul which can give it complete life, and the soul . . . is fascinated, leans forward and falls. This fall is the beginning of life." "Such, Bergson tells us, is the mechanism of the dream. But such, too, is that of the waking state. When we glance through a book or listen to a conversation, we get but a sketch of things. This sends out a call to the memory of the thing as a whole, and this memory, imprisoned in the unconscious, ready to respond, darts outside, is realized, and takes bodily shape in the sketch of the perception which in turn it illumines.

But in what particular, then, does the waking state differ from the dream? The dream is inclu-

"*Ibid.*, pp. 117-18."

sive of the entire mental life, except the positive effort of concentration which brings the recollection into relation with present perception. The dreaming self is a distraught self which lets itself go and plays with its perceptions. On the other hand, "*waking and willing* are one and the same thing," for in order to obtain *precision of adjustment*, there must be adaptation to reality, which is continually renewed; there must be a positive effort searching among all our memories for the one which will most exactly interpret the sign of the thing reached through the senses, and equip us effectively to perceive the thing itself.

Under these conditions it can be understood why it is so difficult to get hold of the existence of pure memory, for to bring it within our grasp it must be recalled and actualized, and to recall and actualize it, it must be induced to extend itself into images and movements projected or realized, and thus become mingled with the body. Nevertheless those who dream much and remember the dreams occurring in profound sleep may possibly arrive at imagining what pure memory—the memory of the soul—is like, thanks to a kind of *detachment from life* which slackens the tension concentrated on action, without, however, being able to lay hold of a new concentration, which would be that of pure spirit.

The closest approach to this detachment, to this reconcentration on the spiritual plane, is no doubt made by the soul of the artist, the soul enamored of perfection. "From time to time, however, in a fit of absent-mindedness, Nature raises up souls that are more detached from life. Not with that intentional, logical, systematic detachment—the result of

reflection and philosophy—but rather with a natural detachment, one innate in the structure of sense or consciousness, which at once reveals itself by a virginal manner, so to speak, of seeing, hearing, or thinking. Were this detachment complete, did the soul no longer cleave to action by any of its perceptions, it would be the soul of an artist such as the world has never yet seen.” “ But as a general rule things are quite otherwise. Between nature and ourselves, between us and our own consciousness, a veil is interposed. We have to live. Now life consists in *action*, and consequently in *choice*, in the acceptance of utilitarian impressions of things only, and in responding to them by appropriate reactions. When a peasant looks at the setting sun he sees only its presage of the weather to be expected on the morrow; when the hunter crosses a field he sees only the possibility it affords of cover for game. Both of them let go of the *individuality* and the beauty of things, and retain only that aspect in which they have an interest, the advantage which may be derived from them in the execution of their plans.

Now, it is just here that the body intervenes, and the brain in particular; for the brain is an instrument of action, i.e. an instrument of selection. Its proper rôle is to limit the mental life demanding that it look at things with a view to action, pick and choose among all our memories, and make clearly conscious, through the power of recall conferred upon it, the memory useful in completing and illumining the situation at issue in the light of the action to be

“ *Laughter*, p. 154.

accomplished.** All our memories are there, mute and unconscious, because they are *powerless* to volunteer, yet alive all the same, and ready to become real and actual at the first summons. The rôle of the body is to do the recalling of the memory that is useful, setting all others aside, and this makes it doubly necessary to the mental life. In truth, the mind, since it preserves all, ought constantly to have present all its past, but then it would be lost in an endless dream; a multiform and ineffective dream. It would be unable either to forget or to choose. Now, if it is an immense advantage to be able to recollect, it is no less so to be able to forget. The body is the instrument in control of forgetfulness, as of recall; through (1) the sensations it receives, and through (2) the movements it is capable of executing, it focuses the mind and gives it ballast and poise; it conditions our *attention to life*, which is the very measure of our action.

Now *action* is the law of man. In pursuing it a man pursues his destiny; thought by inserting itself in life and concentrating upon action becomes more fully conscious of its own nature, and, in the same way, more conscious of its independence face to face with matter. But let us take care that action does not fascinate us to such a point that it wholly absorbs us. If we cannot detach ourselves from it entirely, neither is it well to attach ourselves too rigidly to it. "*Attachment and detachment*, these are the two poles between which morality oscillates. . . . If we are not attached to life, our effort will be lacking in intensity. If we do not detach ourselves

** *Matter and Memory*, pp. 233-34.

in some small degree, at any rate, and by means of thought, our effort will be lacking in aim and direction." ⁸⁷

Thus we are constantly moving from the *plane of the dream* to the *plane of action*. Equilibrium, for the life of human beings, consists in a *balanced movement* ⁸⁸ which crosses from one plane to the other, and never consents to be confined to either. Every upsetting of this equilibrium is prejudicial to the mental life. There is in every one of us a dreamer and a man of action, an artist and a "realizer"; we must never allow the one to oust the other entirely. A human being who would be content to *dream* his life away instead of living it, a being cut off from action, would have the whole of his past history before his eyes at every moment, but he could not cross from the particular to the universal, from multiplicity to unity; and how the multitude of events composing his history were associated would be a matter of mere chance. On the other hand, whoever would repudiate all memory of the past and be content to confine his life to action and never really ponder over it would act like a conscious automaton or robot, and follow the lead of habits found useful; he would perceive only the resemblances and not the differences between men and things and, like the dreamer, though on an inferior plane, he would finally become the prey of automatism. The first man would be detached

⁸⁷ *Bulletin*, May, 1901, p. 57.

⁸⁸ It is through an interruption of this equilibrium, itself due to a relaxation of attention to life and the impulse of consciousness toward the future, that Bergson explains the illusion of false recognition or "memory of the present" (*Mind-Energy*, Chap. V).

from life, but too much so, because he has lost all interest in chances for action. The second man would be bound to life, but again too much so, because he lives only in and for the present. Madness would lie in wait for both. The dreamer, abandoning himself to pure ideas, like Don Quixote, the classic example of systematic absent-mindedness, lives in a world of illusion, governed by a dream-logic; the man of action, like the "business man" aiming at direct utility only, sets machines, at work, acts mechanically himself, lives in matter, and ends by acquiring the stiffness and the materiality of that which he handles, according to a logic of automatism. Finally both would become mad. And it is to protect them from such an outcome of their folly that society has invented laughter.**

* The equilibrium of human life, like that of human thought, consists ° in passing continually from the one plane to the other; of an incessant movement from the sphere of action to that of pure memory (for this is the essence of the general idea). Normal human life spends its time in constantly grasping differences and resemblances, the complex nature of things directly perceived, and their habitual ties with what is of present use (for herein consists the sense of the real, the adaptation to reality). The well-balanced man puts himself into the thick of action, but dominates it. And the application of this impetus of consciousness, this tension of our inner force to reality, measures the degree in which we are free.

** Cf. *Laughter*, p. 146.

° Vide *Matter and Memory*, Chap. III.

Now we are within reach of the answer to the question: Why have we a body, and how does consciousness adjust itself to it?

We live, but not exclusively, in past and future, by means of the mind which is both memory and freedom. We also live in the present, by means of the body, which inserts and actualizes the immediate past in the imminent future. Our present is essentially sensori-motor, or ideò-motor; it is the connecting link between a sensation or an idea and a movement that extends it in action. Now this connection between idea and movement, the prototype or first figure of which is afforded us by the coördination between our visual perceptions and our tactile or motor perceptions—the psychological source of our belief in causality⁴¹—is something so intimate, and the movement which bears us from one to the other so sustained, that if this link between vision and action, between the idea and the movement, be ruptured, it not only happens that the movement, being paralyzed, cannot be carried out, but the idea itself can no longer be actualized; it remains unconscious, because it is impotent and shorn of support and direction. This is what happens in certain cases of psychic blindness, as in certain cases of verbal deafness. The patient preserves intact his sense of sight as well as his visual memory of words; he can write to dictation, but he cannot copy or reread his words; or, if he sets himself to copy them, he will sketch the words he has written as if they were Chinese characters. The link binding the idea to the visual image and to the move-

⁴¹ See Bergson's lecture at the Philosophical Congress in Paris, 1900.

ments of the hand is severed; the patient can no longer copy or repeat the word. *Because he cannot reproduce the object, he no longer recognizes it*—proof that recognition does not occur unless an image exists in the mind of the movements which would reproduce the object; proof that we actively sally forth to meet the object; that the idea or the recollection tends toward and ends in action in such fashion that if the action be suppressed the idea itself, as it were, undergoes paralysis.

An exact determination is arrived at in this way of the rôle played by the body in our thought.

A cerebral lesion does not injure the idea or pure recollection, but in injuring the movements which serve to articulate or express it, in breaking the coupling that unites them, it paralyzes the recollection and prevents it from being actualized.

Thus at the same time are both the rôle of the body and its limitations made manifest. In the exact measure that thought has need of movements, "motor diagrams," and articulations of which the brain is the instrument, it can and ought to be said that the brain conditions thought. "Given a definite psychic state, the *jouable* part of that state, i.e. that which would be interpreted by an attitude of body or by bodily actions, is represented in the brain; the rest is independent of it and has no cerebral equivalent. Given a certain cerebral state it will be found that many different psychic states may correspond with it, but not all psychic states whatsoever; those that do must all have a common motor diagram. The same frame may do for many different pictures, but not for all pictures." " Looking

⁴⁴ *Bulletin*, May, 1901, p. 54.

at the frame alone, tells you nothing about the picture but its size. Looking at the motor diagram, the images it summarizes, and the movements outlined by it, tells you nothing of the thought but its exterior. Again, "a coat is solidary with the nail on which it hangs; it falls if the nail is removed; it sways if the nail is loose and shaky; it is torn or pierced if the nail is too pointed; it does not follow from all this that each detail of the nail corresponds to a detail of the coat, still less that nail and coat are the same thing." "The brain is like a nail to which the consciousness is attached. So, too, if you like, "the presence or absence of a screw may decide whether or not a machine will work," but it does not follow that the screw is the equivalent of the machine; it is but a part of it, as the cerebral state is but a part of the whole machinery of thought.

All these comparisons are certainly metaphors only, but they all express the same idea, an idea imposed upon us by experience which facts have verified, viz. that the soul is solidary with the body as its instrument but not as its cause. Without the body the mind cannot work and act; but it can exist without the body.

Finally, the same considerations illumine the problem of the union of body and soul. The facts brought to light by Bergson render materialism in all its forms untenable. They confirm spiritualism, but they correct and complete spiritualism in its classical form, and at the same time sustain it by proof. Aristotle had coupled body and soul, form and

^{**} *Mind-Energy*, pp. 45-46.

matter, too closely; on his own theory he had made the survival of our memories (which he regarded as a bodily function) very difficult to conceive. By his dualism Descartes absolutely guaranteed the continued existence of the soul, but by separating soul too completely from the body, he made this coupling (which he could not deny) difficult to account for. Like Descartes, Bergson differentiates soul from body and does it better than did Aristotle, but instead of sundering them as Descartes does, he is like Aristotle in this respect, for he makes clearer than Aristotle how closely they are coupled, and even prepares the way for reciprocal relations between them.

Thus by a searching analysis of the facts, by putting intuition to the test of contact with experience, vivifying experience by establishing contact between it and intuition, Bergson provides the means by which to give a *positive* answer to "the most serious problem that humanity can propound"—that of our destiny.

"Whence do we come? What are we doing here? Whither are we bound? If philosophy could really offer no answer to these questions of vital interest, if it were incapable of gradually elucidating them as we elucidate problems of biology or history, if it were unable to forward the study of them through an experience ever more profound and a vision of reality ever more piercing, if it were bound to be nothing better than an endless tournament between those who affirm and those who deny immortality by deductions from the hypothetical essence of the soul or of the body, we could well indeed say—to

adapt a phrase of Pascal's—that the whole of philosophy is not worth an hour's trouble." "

It is true, observes Bergson, that immortality itself cannot be proved experimentally. If you demand signs, like the Pharisees, no sign can be given you. And the reason, it seems to me, is simple enough; it follows from our previous analyses. In the conditions at present existing, an idea, like pure memory, can be actualized and consequently transmitted only where it can become articulate through the instrument of the brain. For this reason, although apparently nothing hinders the transmission of thought from a distance between living beings (and telepathy seems to be an actual fact, established by the method of concurrence), it does not seem possible for disembodied souls to communicate with the living, since all transference of mind to mind is effected by means of a communication from body to body. It is not surprising, therefore, that on this point facts are silent.

But on the other hand, incontestable facts demonstrate that "mental life cannot be an effect of bodily

"*Ibid.*, pp 71-72

"In his lecture on "Phantasms of the Living," given in London, 1913, and reproduced in Chapter III of *Mind-Energy* Bergson enters upon a profound analysis of a concrete case in which there had been television of a complex scene, perceived in all its details, and in all points conformable with reality (the death of an officer in an engagement). Now the exact agreement between the vision and the scene, divided up into an infinite number of details all independent of each other, cannot be explained by chance, because "an infinite number of coincidences is needed in order that chance should make a fancied scene the reproduction of a real scene" (p. 84). This is a noteworthy application of the method of concurrence of independent data, appropriate to the certainty to be obtained in historical or judicial matters, and, in customary use, in all the sciences of concrete reality.

life, that it looks much more as if the body were simply made use of by the mind, and that we have, therefore, no reason to suppose the body and mind united inseparably to one another." "In such conditions, adds Bergson, "survival becomes so probable that the onus of proof falls on him who denies it rather than on him who affirms it." The probability arrived at, one which is continually increasing, is, in his opinion, practically equivalent to certainty.

We must go even further. Bergson has declared that he would be satisfied, if he were able, in dealing with this problem concerning the relative independence between the psychical and the physical, to arrive at the same certainty as Pasteur in his thesis that "there is no spontaneous generation." He not only got so far, but went beyond that point. Pasteur indeed demonstrated, not that spontaneous generation was impossible, but that in the present conditions of life it does not exist; there is no proof, however, that it may not have occurred in different conditions. All that we can say—and this result by itself is of capital importance—is that the burden of proof is incumbent upon those who *affirm* spontaneous generation, since all known experience *believes* it. But as far as the preservation of memories is concerned, it is not necessary to exhaust the total range of experience. A single case, observed with care, establishing the independence of memory apart from the brain, would suffice to establish that the brain is not the whole cause, or, to put it differently, the all-sufficient condition of thought. Now such proof exists; that is undeniable. Does it establish,

* * *Mind-Energy*, p. 71.

besides, that the brain is not the necessary condition for the existence of the minds, or, in other words, that the mind may exist without the brain? It does establish it, since the memory survives and persists after the destruction of the cerebral matter which gave it support. It is quite true that this cerebral matter, in present conditions, appears, no doubt, to be essential to the expression or articulation of thought. But cannot a state be conceived in which a memory, in order to be present and also transmissible, would have no need to be articulated, and hence would not require a body? Cannot a state be conceived in which minds could communicate with each other by their presence alone, by a mere glance of the soul, without any support from cerebral matter? Undoubtedly. The facts, therefore, render not only possible but probable, even infinitely probable, a rational belief in the immortality of the soul.

For this, as St. Theresa says, "There is no need to ascend into heaven; let us enter into our own souls and that will suffice." It is by entering into our own souls that we read our immortal destiny.

CHAPTER VI

EVOLUTION AND CREATION. THE SIGNIFICANCE OF LIFE. MAN'S PLACE IN THE UNIVERSE

Creative Evolution is a great book; more than any other of Bergson's works, it established his reputation in both hemispheres. "It seems to me that nothing is important in comparison with that divine apparition," wrote William James (June 13, 1907); it is "a marvel, a real wonder in the history of philosophy, making, if I mistake not, an entirely new era in respect of matter . . . a pure classic in the point of form . . . such a flavor of persistent *euphony*, as of a rich river that never foamed or ran thin, but steadily and firmly proceeded with its banks full to the brim."¹ This verdict from America was reëchoed in France; abundant testimony exists revealing the enthusiasm felt by readers of *l'Évolution créatrice*, who give reasons for their delight. To thinkers deprived of all spiritual nutriment, and fed upon a diet of futile concepts and materialism, *Matter and Memory* had uncovered the world of the soul; *Creative Evolution* now restored to them the feeling of the presence of God.²

¹ Letters of William James (Boston, Atlantic Press, 1920), p. 290.

² God is not named in it, save once only, and then rather indirectly (p. 248), but, as Joseph Lotte says, He is felt on every page, which is more to the point.

This spontaneous expression of a living and stirring reaction very probably strikes a true note. But in other circles the book was acrimoniously discussed, and still more often misunderstood. I remember one of my former masters, now dead, who said to me in 1907, "*Creative Evolution* is a beautiful poem, but that is all." Like that philosopher, many biologists were satisfied to catalogue Bergson's "*élan vital*" as one more useless metaphysical concept or image, instead of examining the facts or discussing the difficulties pointed out by Bergson which stood in the way of the acceptance of their own system; undeniable facts and insuperable difficulties, which they would have found it very hard to meet, and which it was much more convenient to ignore, or feign to ignore. In certain circles where it seemed likely Bergson's book would obtain a hearty reception, since it aimed a mortal blow at mechanism, it had, though apparently for quite other reasons, no better success, and its author was vehemently attacked. His doctrine was declared to be pantheistic and "essentially atheistical"; it was termed "creative pantheism" and "evolutionary monism." * That *Creative Evolution* should give rise to so many.

* But not all. *Creative Evolution*, or certain of its theories, was well received and even used by a certain number of biologists, especially in England and America (Johnstone, *The Philosophy of Biology*, Cambridge, 1914). In France the only marked hostility was that of Le Danzec. Cf. an article by Mourgué on "*Néo-vitalisme et sciences physiques*" (*Revue de Métaphysique et de Morale*, 1918).

* Read, for instance, H. Fairfield Osborn's *Origin and Evolution of Life*.

* These are the expressions used by Jacques Maritain, *La philosophie bergsonienne* (Paris, Rivière, 1914), and by Père Garrigou-Lagrange, *Le sens commun, la philosophie de l'Être et les formules dogmatiques* (Paris, Beauchesne, 1909), pp. 296-97.

divergent interpretations, and lead to an exegesis so manifestly contrary to the spirit of the book and the express statements of its author, as the pantheistic exegesis, would be hard to comprehend unless the fundamental originality of Bergson's point of view be kept in mind. "There is so much that is absolutely new," wrote William James to Bergson. (June 13, 1907), "that it will take a long time for your contemporaries to assimilate it, and I imagine that much of the development of detail will have to be performed by younger men whom your ideas will stimulate to coruscate in a manner unexpected by yourself." Side by side with this substantial cause of "incomprehensibility," another must be pointed out, not so radical, but none the less contributing to provoke and above all to propagate certain errors by lending to them a semblance of truth. This second cause of failure to comprehend is to be found in the ambiguity of certain formulas in which Bergson sought to express his intuition, or certain epitomes he used to sum up a collection of facts. These expressions have been taken in an arbitrary sense, apart from the context which explains them and apart also from the experience they serve to condense. Man's intellectual sloth is incurable, and it is always fatal to furnish it with pretexts for its

* *Op. cit.*, p. 291.

† This may be one of the reasons which caused the book, as well as *Time and Free Will* and *Matter and Memory*, to be placed on the *Index Expurgatorius* in June, 1914. The reader should remember that in any case putting a book on the *Index* merely indicates to the public that there may be danger in its perusal, without its being necessarily untrue. The proof of this statement is to be found in the fact that permission to read books that have been placed on the *Index* is readily granted to educated people.

exercise by offering him abridgments which exempt him from examining the complete data. The very title of the book, as also the term "*élan vital*," has provided many biased minds with an excuse of this kind. It must be confessed that if their meaning is sufficiently clear to those who have made the effort required to penetrate to the depths of Bergson's thought, this is not true of others. In fact, it might be possible to believe that, according to Bergson, it is evolution that creates, instead of its author, God. But, to decide a point like that, the title is not enough, nor will a superficial reading of the book help much. This is more than ordinarily true, because Bergson, faithful to his own method, does not allow himself "to enunciate any conclusion which in any way goes beyond the experimental considerations on which it is based."

In truth, *Creative Evolution* is a book difficult to understand, and it is necessary for anyone to look twice before either adopting or criticizing its views, if he wishes to be sure first that he understands them aright. And for this reason, before we undertake its study and note its leading ideas, and especially its elements of permanent value, it is indispensable to bear in mind the close bond which links *Creative Evolution* to *Matter and Memory*.

As early as 1894, Bergson tells us, the study of memory put him on the trail of life, made it manifestly clear to his mind what his next subject for study must be. He tells us that all the time he was engaged upon *Matter and Memory*, he felt that a thorough examination of the theory of evolution by him was inevitable. And why? The answer to this

question will enable us to discern more clearly the profound significance and the original design of *Creative Evolution*, and thus penetrate to the very heart of the book.

Let us recall briefly the conclusions to which *Matter and Memory* led. The facts incontestably demonstrated that the past is preserved within us in two different forms: in independent memories, disposed through the whole course of time and preserved by the mind; and in motor mechanisms which sketch the outlines of their action in space, and are registered by the body. The motor mechanisms may be localized to some extent in the brain, but not the memories. Cerebral lesions may affect the movements, but not the memories. Lesions put an end to the memories in appearance only; they simply shut them off from becoming actualized any more or from becoming a factor as before in the real. Indeed, as many converging facts conclusively prove, they leave our memories intact. Thought needs the brain in order to express itself, but not for its existence; it is the body that forgets and possesses the power of recall, because forgetfulness and recall are part of the apparatus of *action*; but it is the soul that preserves and recognizes, because preservation and recognition belong to *thought*. This point is definitely settled.

But let us examine more attentively the relation of thought to movement, soul to body. Bergson has shown, "from the very example of recollection, that the same mental phenomenon involves at the same time many different *planes of consciousness*, which denote all the intermediate stages between

dream and action; it is on the last of these planes, and on that alone, that the body intervenes." * Now from this equilibrium, which is essential between dream and action, from this insertion of thought into reality which constitutes life, a new problem arises: that of *the significance of life itself*. In 1901 Bergson let us see how the problem then appeared to him: "I must tell you then that I cannot contemplate general evolution and the continuity of life in the sum-total of the organized world, the coördination and subordination of the vital functions to one another in the ~~same~~ living being, the relations that psychology and physiology in combination seem to establish between cerebral activity and the mind in man, without arriving at the conclusion that life is an immense effort attempted by the mind to obtain from matter something that matter does not wish to give it. Matter is inert, it is the realm of necessity, it proceeds mechanically. It seems as if the mind tries to profit by this mechanical aptitude of matter, to utilize it for *actions*, to convert thus, into movements contingent in space and into events unforeseeable in time, whatever measure it bears within it of creative energy—at any rate all that this energy has that is *jouable* and capable of being exteriorized. . . . But it is caught in a snare. The whirlwind upon which it is poised seizes it and carries it away. It becomes the prisoner of the mechanical devices it has set up. Automatism takes hold of it and, by an inevitable forgetfulness of the aim it had set itself, life, which should only be the means to a higher

* *Matter and Memory*, preface to the first edition.

end, is entirely spent in an effort to preserve itself. From the humblest of organized existences to the higher vertebrates coming immediately before man, we witness an attempt which is always frustrated, and always renewed with more and more skill. Man has triumphed—with difficulty, however, and so far from completely, that it needs but a moment's slackening or inattention for automatism to seize him once more. He has triumphed, nevertheless, thanks to that wonderful instrument, the human brain! . . . the brain, which might be termed an "instrument of sport," the first of all sports being language, the instrument of liberation *par excellence*, in spite of the automatism which it ultimately inflicts on thought. But in general, the superiority of the brain consists in the power of liberation it gives us face to face with corporeal automatism, permitting us continually to create fresh habits which absorb others or hold them within bounds. In this sense we shall find nothing in the brain which corresponds with the process of thought, properly so called; and yet it is the human brain which has made human thought possible. Without it the higher mental faculties could not incline toward materiality without being seized by automatism and swept away in the unconscious."*

Now in reflecting on these facts, the difficulties they raise, and the way in which these may be overcome, Bergson perceived that in this perpetual contact with materiality, or rather, through this constant orientation of its attention toward things material, our intellect had contracted at length certain habits

* *Bulletin*, May 2, 1901, pp. 55-56.

which had impaired the original purity of our cognition. Inexorably entangled in the demands of action itself, and therefore led to "materialize its concepts and act out its dreams," induced thus to confuse the speculative with the practical, to urge an idea in the direction of utility when it believes it is investigating it theoretically, in short, using the forms of action for thinking, the *faculty of understanding* in us seems to be strictly subordinate to the *faculty of acting*, and "our intellect, in the strict sense of the word," to be "intended to secure the perfect fitting of our body to its environment, to represent the relations in which external things stand among themselves, in short, to *think matter*." Bergson has expressed this idea admirably: "Harnessed, like yoked oxen, to a heavy task, we feel the play of our muscles and joints, the weight of the plough, and the resistance of the soil. To act and to know that we are acting, to come into touch with reality and even to live it, but only in the measure in which it concerns the work that is being accomplished and the furrow that is being ploughed; such is the function of human intelligence."¹⁰ From this point of view, it follows that intellect in man must be regarded "as a special function of the mind, essentially turned toward inert matter."¹¹ The human intellect, in fact, only feels truly at home among inanimate objects; it is only really satisfied when it is able to translate things, by a cinematographical method, into manageable signs, into fixed signs—the *concepts* of other days, and the *laws* of our own

¹⁰ *Creative Evolution*, p. 191.

¹¹ *Ibid.*, p. 206.

—that is, into magnitudes which are measurable, in short, into quantity. These, indeed, are the characteristics of all human science, and more particularly of modern science since the marvelous success of the geometrical astronomy and physics of Kepler, Galileo, and Descartes, which led to the establishment of a constant relation between variable magnitudes, that is, between the quantitative variations of the phenomenon or of its elementary parts.

The intellect, intoxicated by its discoveries in this domain of the material, bestrides the entire physical and moral universe, measuring tape in hand, and since *matter alone is measurable* it endeavors to translate everything into the terms of matter: movement to the space which subtends it, sensation to the physical stimulus which incites it, thought to the cerebral process which conditions it, liberty to the mechanisms it utilizes, a vital creation to the fixed symbols or dead forms in which it expresses itself. As if all this symbolism, material and mechanical, were more intelligible in itself, and for us, than the reality, its original, which is directly given us by pure unadulterated consciousness! But we live surrounded by machinery, and our chief aim is to manufacture machines or tools for manufacturing machines to act upon matter;¹² so much so that

¹² "In thousands of years, when, seen from the distance, only the broad lines of the present age will still be visible, our wars and our revolutions will count for little, even supposing they are remembered at all; but the steam-engine, and the procession of inventions of every kind that accompanied it, will perhaps be spoken of as we speak of the bronze or of the chipped stone of pre-historic times; they will serve to define an age" (*Creative Evolution*, pp. 138-39).

our intelligence is affected by a kind of professional warp, which has reached the point of inability to envisage clearly anything other than that which it can handle and make. That set or bias has extinguished other powers belonging to the intelligence in order to give right of way to and exalt the geometrizing latent therein; in short, it has become *mechanized*. Then, struck with admiration for the machines it has constructed, it has begun to worship them; and it has made science, this material and mechanical science, its idol.

Desire it or not, deplore it or not, the fact remains, and if it be held (not unreasonably) that this mechanized intelligence is only a counterfeit of real intelligence, and we may hope that this warp is only a temporary defect, yet such a state of thing cannot be remedied unless we are clearly conscious of it. Human intelligence as it appears to-day in the vast majority of human beings, and also in each one of us, *whenever we let it follow its natural course*, is a faculty oriented toward action, and hence toward matter, in which action is hatched, hence toward measurement, which is the point of application of human activity upon matter. Accustomed as intelligence is to measure in order to understand (because it first sought for, and first succeeded in understanding matter, and because understanding matter means measuring it), it confuses true intelligence with the work of measuring, and the intelligible with the measurable, that is, the spatial, and, more definitely still, with that which in the spatial is solid, immobile, and discontinuous. Our logic and our geometry, in the form they have

assumed with us,¹³ arise out of this error; they are tracings over matter, done with a view to further applications to matter, and here it is that our intelligence triumphs by the use of its two essential processes, deduction and induction, both bound up with the intuition of space. In this sense, we may say with Bergson, "All the operations of our intellect tend to geometry, as to the goal where they find their perfect fulfillment."¹⁴

But to say that we are at ease only in the repeatable, the discontinuous, in the immobile and the dead, amounts to saying that "the intellect is characterized by a natural inability, to comprehend life."¹⁵ Hence results—and in this way is explained, in truth—the inability of our thought, in its purely logical and geometrical form, to include the real in its entirety in its categories, or by its ways of measuring to grasp its interiority or inmost essence, or, most important of all, to picture to itself or to enclose within its own framework the true nature of life and the significance of the evolutionary movement which produces it. "In a general way, *measuring* is a wholly human operation, which implies that we

¹³ This remark, whatever may be said about it, in no way disturbs the validity of the principles of identity and of reason, or of causality. What it does contest is the rigid and arbitrary applications that our intelligence draws from them, when it substitutes for concrete things the logical symbols by which we represent them, and for the order of things, the order which must be followed in manipulating these symbols (*Vide* p. 160 and Chap. III). In a similar way Cournot had shown how much there is that is conventional and artificial in the *logical order*, which is dependent on our language, as opposed to *rational order*, which is dependent on the nature of things.

¹⁴ *Creative Evolution*, p. 210.

¹⁵ *Ibid.*, p. 165.

really or ideally superpose two objects one on another a certain number of times. Nature did not dream of this superposition. It does not measure, nor does it count." ¹⁰ Movement is not produced by the juxtaposition or the addition of pause to pause, life is not made out of death, and history does not repeat what is past; everywhere, nevertheless, movement, discovery, creation, "unforeseeability" exist, and these constitute duration, these are life itself. This is reality, whilst all else is but its waste product. Unable to lay hold of reality in its own life and nature, the intellect has first devised artificial symbols as substitutes for it, and then tried in vain to reconstruct it as it is.

This lengthy analysis only serves to recover, by probing and defining it, Bergson's initial intuition as it originally manifested itself to his mind, and as he expounded it in his *Essai sur les données immédiates de la conscience*, and later applied to one special point in *Matter and Memory*. But at the same time this analysis affords an inkling of a fresh point of view, which will permit him to attack the problem from another level, and look for—possibly find—the reason for the results he has ascertained.

If intellect is thus in accord with matter, does that not mean that they have been progressively adapting themselves to one another, that the same movement has engendered them, or rather, the same inversion of the one movement, the same "detension" of the same impetus of life which has both intellectualized the mind and materialized things? The history of the evolution of life, incomplete as

¹⁰ P. 218.

it yet is, already reveals to us how the intellect has been formed, by an uninterrupted progress, along a line which ascends through the vertebrate series up to man. It shows us in the faculty of understanding an appendage of the faculty of acting, a more and more precise, more and more complex and supple adaptation of the consciousness of living beings to the conditions of existence that are made for them.¹⁷ Now, if that be the nature of our thought, adds Bergson, and the operations of our understanding are linked to a species of activity which itself is but a partial manifestation of life, a result or a by-product of the vital process, then the limits of our thought and, by the same token, its real value, would be at once determined. "Created by life, in definite circumstances, to act on definite things, how can it embrace life, of which it is only an emanation or an aspect? Deposited by the evolutionary movement in the course of its way, how can it be applied to the evolutionary movement itself? As well contend that the part is equal to the whole, that the effect can re-absorb its cause, or that the pebble left on the beach displays the form of the wave that brought it there."¹⁸

Such is Bergson's hypothesis, and like every hypothesis it is debatable; it cannot be self-verifying; it has to be taken or left. But, again like all hypotheses, it ought to be surveyed in respect to its starting-point and the point it arrives at. Its value is to be measured on the one hand by the fruitfulness of the intuition whence it proceeds, and on the other by the results it has gained, and the facts

¹⁷ Intro., p. ix.

¹⁸ *Ibid.*, p. x.

whose significance it has brought out; these cannot be called in question.

Now the point whence the Bergsonian intuition sets out is a perfectly just and legitimate beginning. Instead of taking human intellect in the abstract, and regarding it as given to us ready-made, sovereign, ruling by right divine—as most of the intellectualist philosophers, from Fichte to Spencer, have done—Bergson asks our intellect to show its credentials; he makes an effort to put it back into its proper place in man, and to restore man himself to his true place in the universe. He thus avoids, even more, he denounces and utterly overthrows, the error which has vitiated most of these systems of philosophy. That error consists, on the one hand, in affirming the unity of nature organic and inorganic, and portraying this unity as an abstract and geometrical form devoid of any line of cleavage. On the other hand, it supposes our capacity for cognition to be coextensive with the real, that it is as vast as reality, able to embrace it in its sum-total, and even to deduce or construct it *a priori*, since all that is geometrical in things is entirely accessible to human intelligence, and as the remainder is perfectly continuous also with geometry, it must be equally intelligible. This claim and pretense of the philosophy which “boldly proceeds with the powers of conceptual thought alone, to the ideal reconstruction of all things, even of life,” is ridiculous and inadmissible. It signifies an inordinate confidence in the powers of the human mind, the individual mind, and also an inconsistency, even an inner contradiction in its principle sufficient to overthrow it. For when asked to explain the origin of

our intellect, this philosophy was naturally evolutionist: "It had begun by showing us in the intellect a local effect of evolution, a flame, perhaps accidental, which lights up the coming and going of living beings in the narrow passage open to their action; and lo! forgetting what it has just told us, it makes of this lantern glimmering in a tunnel a Sun which can illuminate a world." It is true that, faced by the difficulties against which it hurtles in this attempt to reconstruct reality, it very speedily renounces its first ambition, stops short at the world of the relative, and interdicts the absolute, by proclaiming it the Unknowable. "But for the human intellect, after too much pride, this is really an excess of humility."¹⁰ In truth, tending toward action, modeled upon the necessity for action, and consequently upon the resultant material reactions which ensue, our intellect really must know some fragment of reality; it must deliver to us something of the very essence of bodies; it must be in touch with the absolute at some one point. Does it ignore and will it always ignore all that goes beyond matter? Will it have to decline the task of delving into the nature of life and going beyond, at this point, the symbols of science to the direct vision of its object? Yes is the answer, if the understanding has exhausted the full resources of the mind, but if it has not, No. How are we to decide?

Our course will be to follow the method we have applied to the study of the intellect and its formation, making the return journey and retracing the course of the evolution whence man proceeds to its source and "digging to the very root of nature and

¹⁰ *Ibid.*, pp. x-xi.

of mind." Possibly, indeed, we shall be led to see that "the line of evolution that ends in man is not the only one," that "on other paths, divergent from it, other forms of consciousness have been developed which have not been able to free themselves from external constraints or to regain control over themselves, as the human intellect has done, but which, none the less, also express something that is immanent and essential in the evolutionary movement."¹⁰ By reintegrating these powers that are complementary to the understanding, which it has unloaded along its course with conceptual and logical thought, and thus amalgamating them with intellect, could not we obtain a consciousness coextensive with life which is able to capture a vision of it whole, albeit a fleeting one?

Let us resolve to obtain it and, like one who throws himself into the water to learn to swim, run the risk involved. Let us force the intelligence abroad and have it come to a decision to trail its own genesis clear back to its initial stage, that it may extend its scope by recovering its full powers at their source. Such an undertaking is unreasonable in appearance only; it is not so in fact, and, once accomplished, it will no longer appear so, for its end and aim is "to expand the humanity in us and make us even transcend it."¹¹ In submitting to this discipline, "our understanding itself" will thus have prepared the way for "a philosophy which transcends it"; to the *intellectuality* within us, which is the parent of materiality, we shall have added *spirituality*; we shall no longer see, nor shall we live

¹⁰ *Ibid.*, p. xii.

¹¹ P. 192.

with the eyes of the intellect alone acting upon matter from outside; we shall see and we shall live with the spirit, with "that faculty of seeing which is immanent in the faculty of acting and which springs up, somehow, by the twisting of the will on itself"; "on the will taking itself in hand to burst through its barriers. For man is only truly man when he transcends himself.

This amounts to saying that the *theory of knowledge* and the *theory of life* necessarily interlock, that they are inseparables, and that they ought to collaborate in the progressive construction of a method and science of reality and in the progressive solution also of the great problems propounded by philosophy.

Now the first of these problems is the very one arising out of the relations of life with knowledge in man. Man, with the attention of his intellect directed toward matter and geometry, appears on the scene at the end of a line of evolution. The question at issue, as we have said, is whether evolution has occurred on this line only and if the intellect is the only possible terminus, or whether other powers have not been left upon the road traveled which must be recovered. That question is to be settled by the facts. Then, and then alone, can the significance of life, the scope of the human intellect, and the place of man in the universe be decided.

Bergson set himself, therefore, at the study of life and of evolution. He worked at it for eleven

years before writing his book, which he then did in long swift stretches and apparently offhand, but it was the outpouring of a thought that is fully master of itself. He had acquired not only a bookish but an experimental knowledge of his subject. He spent whole vacations, like Fæbre, in studying ants and bees, especially ants, and in observing the manifestations of that instinct in them which to him seemed to exhibit the highest point reached by one of the lines of vital evolution.

He had undertaken this study of life, moreover, with certain doubts upon the subject of transformism, and a first examination of the subject had confirmed some of these. At that time he was more struck by the fixity of species, and the complementary nature of living forms, both animal and vegetable, than by their evolution or their dependence upon the previous and the succeeding forms.²² It was only after a more prolonged and searching examination that, step by step, he recognized the evolutionary hypothesis as the most probable one. Nevertheless, he allowed a doubt to survive, noting at the beginning of his book that everything occurs as if there had been evolution, without asserting that this evolution did actually occur.²³

Bergson, then, does not regard evolution as a fact; he does not set up as a scientific dogma that which is but a *hypothesis*. His whole aim is to bring out the significance of the *facts* upon which this hypothesis rests. Stress must be laid on these two

²² This great law of complementary relation, so misunderstood nowadays, is nevertheless verifiable in all cases, in the relations between living beings, in the cycles of nutrition, and even in the separation of the sexes.

²³ P. 25.

points, for they really bear all the rest in their train. First of all let us see, by the light of facts recently placed in evidence, abandoning provisionally the Bergsonian point of view, what opinion may be held of evolution to-day.

Evolution is not a fact, but a hypothesis, and (putting the case most favorably) a hypothesis which explains only a part of the facts. The history of living things, regarded collectively and in all its parts, does not naturally suggest the idea of continuous evolution, but rather ideas of fixity and discontinuity. To-day, as throughout the course of centuries," nature shows us certain settled types of equilibrium, each of which represents a certain idea, or usage, to which species, i.e. entirely separate and distinct groups, correspond. These specific types admit of classification in other groups, i.e. classes and branch lines composed of more general and fundamental types of organic structure. But neither the one nor the other can be arranged without a gap in a continuous series, so that insensible gradations only separate them one from the other. Where the scientist found these gradations missing, he supplied them; that is to say, almost everywhere. But these stop-gaps are purely hypothetical devices; they have not been confirmed by facts, and since for the most part they have been invented to fit into the framework of a theory, they do not hold out under close anatomical and physiological anal-

"Vide L. Vialleton, *Membres et ceintures des vertébrés tétrapodes. Critique morphologique du transformisme* (Paris, Doin, 1924), pp. 674 et seq. This work, the importance of which Bergson was the first to point out, will doubtless, like the works of Lamarck and Darwin, mark an epoch in biogenesis, in spite of the fact that it calls for reservations on certain points.

ysis, especially if we take into account the cycles any one form passed through, the functions it fulfills, and its unity. All that the evolutionists have succeeded in demonstrating is the minute modifications in a given form, the functional development or the regression of an organ in short series like those of the Equidæ. They have never been able to show us the transition from one type to another, or the method of construction by which one form is made into another. The Archæopteryx, so often cited by them, is not really the transition bridge between reptiles and birds. It is a bird with teeth and with a tail, that is, with two isolated characters which are not in any way classmarks and which in real life have by no means the importance which our *verbal symbols* seem to confer upon them. We might say the same of the other instances cited. The series established by the transformists are wholly artificial and arbitrary; in default of facts, they have filled the gaps with hypotheses. Indeed, everywhere in organic nature *discontinuity* is to be found below the surface continuity; and this appears, not only between forms and types, but also frequently in anatomical variations; in both cases these appear and disappear suddenly, without warning.

So, too, in living beings, *fixity* is as fundamental, and is more apparent than *variation*; even the very first representatives of the branch lines display all the characters essential to them, and the modifications they have undergone in the course of centuries are infinitesimal compared with the fixity of their organization and of their internal structure. On the other hand, heredity is a mold always working in

favor of the permanence of a specific type, and *not* at all of its transformation. Very far from transmitting to its descendants the characters acquired by an individual in the course of its existence, it constantly tends to eliminate them and bring the species back to its average state, so that we find types of organic structure persisting throughout the ages with incredible stability, and endeavoring to maintain to the end the type of equilibrium they have reached."

Everything which occurs, then, happens as if stable positions or ideal types of equilibrium did exist, limited in number, and as if nature first *leaped* from one to the other by a discontinuous series of indivisible leaps, and then settled down again as long as external and internal conditions permitted.

"These forms, moreover, do not appear to be derived from one another, even by sudden leaps, in a continuous line. The whole history of the appearance of living forms, and the paleontological development of the classes of vertebrates in particular, suggests rather, as Bergson perceived, the idea of a display of fireworks, or, as the modern biologists say, that of a multiplicity of forms like a more or less tufted bush, the main stems of which spread out level with the ground so that it is impossible to connect them to one common trunk. This is not continuous development; it is an ensemble of *divergent* developments, *complementary* at the same time

"Thus it is that according to Quinton (*L'Eau de mer milieu organique*, 1904), animal species which are warm-blooded or of unvarying temperature have maintained, despite the earth's cooling, the warmth of the marine surroundings in which they first appeared.

to one another, for the concurrence of all these forms is necessary to the maintenance of each of them and, consequently, of organic life as a whole. As for the real origin and derivation of all these forms, we know nothing.

Does this mean that there is nothing to retain in the idea of evolution? Not at all. Evolution corresponds essentially with the idea of order, concatenation, or harmony, without which our reason cannot comprehend the world and its history. Even admitting that transformism were proved erroneous (and we must recognize that in its specific details it has been overthrown; and its master conception also rudely shaken), this notion of an ideal order would lose none of its value. Even more, as Bergson observes, (page 25), the broad lines of our present classification would probably remain, as well as the actual data of embryology, comparative anatomy, and paleontology upon which it is founded. Thus, whatever may be the origin of living forms, of the exact order of their appearance, their affiliation and their actual relations, evolutionism would not be wrong in establishing relations of ideal kinship between these living forms. Nor does it seem to be seriously in error when it maintains that wherever there is a relation of *logical* affiliation between forms there is also, at any rate in the main, a relation of *chronological* succession between the species in which these forms become manifest."

In fact, *there must have been evolution somewhere*, if not in organic nature itself, at any rate

"I am here summing up two observations of Bergson's (pp. 25-26), but somewhat understating his assertions with regard to the second point, which is far from being as firmly established as the first.

in the plan of vital organization immanent in nature, or in the way in which Creative Thought has planned it. If the forms in which it is embodied are more or less stable and discontinuous, *life* itself is essentially a continuous current; it is essentially duration.

But the crux of the matter is to realize what this fact *signifies*, and, more precisely, whether the order of appearance of the forms of life which is known as "evolution" is a mechanical order or, in the wider sense, of the word, an intelligent order; whether the current of life which passes from germ to germ, from generation to generation, from one body to another which it organizes, divides into species, and scatters among their individual members is analogous to the mechanism which governs non-living bodies, or to the signs of purposiveness manifested in the life endowed with consciousness.

The evolutionist hypothesis has been unwarrantably allied with a mechanistic and materialistic metaphysics with which it is not in any way involved, but rather would exclude. Radical mechanism and radical finalism, besides, are two views of the evolution of life from the outside; both are ready-made categories which allow its vital essence to escape. Mechanism and finalism, as Bergson observes," alike assume that *all is given beforehand*, either by an impulsion from the past or by an attraction from the future. In this way they misunderstand real duration, which is the property of all that lives; the novelty and very "unforeseeability" manifest in every vital movement of which the creation of ourselves by ourselves, in the history of

our inner life, offers us the most exact image. The ageing process, too, which is the counterpart of this history, also registers the marks of time in these natural systems which organized beings constitute. Who can read beforehand in the features of the child what the grown man will be like? Similarly, who can foresee the appearance of a species, the evolution of a living form and especially of the ensemble of forms of life? This is misunderstood by both systems. Only, adds Bergson, whilst mechanism is a rigid system, to be taken or left *en bloc*, which the slightest trace of spontaneity would suffice to contradict, finalism, in principle essentially psychological, is much more flexible, more extensible, and also more in conformity with the characters which the organism possesses in common with conscious beings. Indeed we adopt it as soon as we reject pure mechanism in order to bring life closer to consciousness. The Bergsonian theory makes use of finalism, but in a very special form which takes the duration of life into account; it is above all a much more precise form, stronger, closer to the facts and to experience, and admits of test and verification by experiment.

Here is the theory, and here is its proof.

The source of the harmony, or rather, "complementarity" between the forms of life and the tendencies they represent; in short, *the finality or purposiveness manifest in the organic world is to be found at the rear rather than on ahead*; it is derived from a *vis a tergo*; it depends upon unity of impulse, and not upon a common aspiration. .

Like the mechanist, Bergson therefore seeks in the

past rather than in the future the reason for this "complementarity." Only, the difference between him and the mechanist lies in his assertion that this impulsion, at least as pure experience reveals it in its effects, instead of being a reductive impulsion, producing only identity, repetition, and death, is a *creative* impulsion, continually welling forth in jets of what is new and unforeseeable; it is not the propagation of brief movement repeated indefinitely, eternally, and blindly; it more closely resembles what is voluntary than what is mechanistic. Rather, we may add, would it suggest the flick of a creative thought which gives an impetus of life along the course of time.

Now; between these two conceptions, the mechanistic conception and its rival, experience must be allowed to cast the deciding vote. Indeed, for the mechanist, the end attained is only the end position in the trajectory. That terminus is accounted for by the state "immediately before," and this by the state which preceded it, unto infinity; it is therefore attained, as Aristotle had already noted,²² in an *accidental* or *fortuitous* manner. Indeed, according to the mechanist, all evolution is the result of a series of accidents which add up together to produce the existing form or state. But in the other, in the Bergsonian conception, if the end arrived at has not been laid down in advance, if it is not predetermined, it has nevertheless been obtained by a process which in some way resembles a voluntary

²² In his remarkable criticism of the mechanists of his day. *Vide* the author's *Notion du nécessaire*, pp. 23-28. The essence of every explanation by mechanical cause alone, as Aristotle has established, lies in making the universe a work of chance.

act of will, since it exhibits an inner directive principle, similar, for instance, to that, which consciousness reveals to us in a motor effort.

Which of these two interpretations is the correct one?

To state the case more precisely, let us suppose that an inhabitant of Mars sees me making a gesture very different from those which he knows or makes. Two explanations may occur to his mind. He may say to himself: This movement is purely mechanical; it is governed by the same laws as govern all the movements that I observe in matter; it is a simple trajectory in space, such as a meteor would describe; it has no meaning. Or again, by an effort of inner "sympathy" he may seek for an intelligent explanation of my gesture, try to discern its meaning and discover the reason which makes me do this action.

When confronted by vital movements we are in the position of this Martian witnessing my gesture. We see the exterior only, we ask ourselves whether there is an interior. Now there is one infallible touchstone which allows us to decide between the two theories. It is the following case.

Let us suppose that two entirely different series of "accidents" on two quite different lines of evolution end in similar results, and in results found useful; this agreement, *this concurrence of independent events*, or, as Pascal would say, *this conjunction of chances cannot be the work of chance*; it indicates the presence of finality or purposefulness that means, according to Bergson's conception, an identity of impulsion in both cases. If the Martian sees two men coming, the one from the right and

the other from the left far horizon by ways and methods which differ widely, who meet at the same point of space and produce some useful effect there, although he will know nothing of the intentions of these men, nor even that they *have* any intentions, he ought reasonably to conclude that the one spot to which they are tending is an end desired by each of them, and that the encounter of the two trajectories is not mere chance, but, to be explained by an identical thought which has, in both cases, given the movement its direction. If, in addition, the outcome of the meeting is repeated and renewed, the proof is absolute; explanation of it by chance, that is, the mechanistic explanation, is absolutely excluded. It is precisely at this point that the facts which Bergson has put in evidence manifest their far-reaching and decisive significance. "Pure mechanism, then, would be refutable," he writes, "and finality, in the special sense in which we understand it, would be demonstrable in a certain aspect, if it could be proved that life may manufacture the like apparatus, by unlike means, on divergent lines of evolution; and the strength of the proof would be proportional both to the divergency between the lines of evolution thus chosen and to the complexity of the similar structures found in them."⁸⁰

Now proof of that kind is in existence. The facts of "heteroblastia," numerous and convincing, show us that every movement, "nature arrives at identical results, in sometimes neighboring species, by entirely different embryonic processes."⁸¹ Let us examine

⁸⁰ P. 54.

⁸¹ P. 75. For the comparison of the eye of vertebrates and of the Pecten, see pp. 67 *et seq.*

the eye of a vertebrate on the one hand, and that of a mollusc like the Pecten, on the other. Both are composed of analogous elements, extraordinarily complicated ones, moreover; both fulfill the same very simple function, that of seeing. Nevertheless, molluscs and vertebrates separated from their common source long before the appearance of an eye as complex as that of the Pecten, and, what is more surprising still, the retina of vertebrates is produced by an expansion in the rudimentary brain of the young embryo, whilst in the molluscs the retina is derived from the ectoderm directly. Here we have, then, two *different* evolutionary processes which lead, in man and in the Pecten, to two eyes of the *same* type. How are we to account for this fact? How are we to explain why organic nature should have led to identical results by different processes? It will not suffice to point out favorable conditions here, or even the occasioning cause which might be of the nature of a "releasing" or an "unwinding."

We must discover the real cause, the quantity and

²² The eye of vertebrates and the eye of the Pecten have one character in common, all the more curious because it is rare. As Bergson has shown (p. 62), both possess eyes with the retina inverted, i.e. eyes in which the visual cells do not receive rays through their external extremity, the one usually turned outward, but through a deeper face turned toward the tissues, so that the light does not reach through their sensitive parts until after it has traversed not only their whole thickness, but that of the deeper cells contiguous to them. Apart from this peculiar inversion of retinal elements, the structure of these two kinds of eyes is somewhat different, especially with regard to the retina of the Pecten; its visual cells are quite unlike the rods and cones and underneath do not possess the two other neurones of the retina of vertebrates. In short, the Pecten's eye preserves the histological composition of the eye of the invertebrate (but with the inverted retina), which confirms the divergence of the lines of evolution in the two groups, or rather, in their structural plan.

quality of which directly influences the quantity and quality of the effect, the cause which creates and explains, which has acted by "impelling," and accounts for the existence and the form of the effects achieved.

Now let us first examine the answer of the mechanist, and see what cause he will assign to account for this phenomenon.

Darwin would reply: In the molluscs and in the vertebrates tissues have been modified by a series of insensible variations due to chance, and all these little accidental differences, added together, have produced a useful change which, because it is useful and gives the species an advantage in its struggle for existence, has been transmitted and is retained by the individuals which act as the bearers of this heritage. But how are we to explain why all these little variations, the outcome of "natural selection," should have been preserved, not once but always, *while they were of no use*, but were merely stepping stones forming a path for the organism to a subsequent piece of construction? Impossibility of the first degree becomes an impossibility within an impossibility when we note the similarity of structure between the eye of vertebrates and that of molluscs, for they belong to two independent lines of evolution. If it be impossible to admit (otherwise than by a miracle) that the *Iliad* was obtained by taking the letters of the alphabet haphazard, then to imagine that two identical *Iliads* have been thus obtained independently is an impossible of impossibles. Now the structure of the eye is a more complicated thing than the putting together of an *Iliad*.

The Neo-Darwinists follow the lead of Hugo de Vries, and by their admission that there are sudden variations or mutations lessen the above difficulty at one point. If the two organs are the outcome of a relatively small number of sudden leaps, their similarity is easier to account for than if they were assembled by an incalculable number of infinitesimal resemblances successively acquired, and we can understand better, too, how each variation has been preserved because sudden variations would be immediately useful. However, the difficulty arises again and is accentuated at another point, for these variations are always charged to the account of chance. Now how are we to justify the assumption that all the parts of the visual apparatus, the composition of which is infinitely complex, could remain so well coördinated during sudden changes that the eye continues to exercise its function? Or that, not once but at each stage, all the parts are undergoing change at the same moment, and regulate these changes so marvelously that the visual power is maintained and even improved. Again—a circumstance still more inadmissible—how are we to justify the assumption that, by a series of mere "accidents," this same extraordinary assemblance of facts should be produced alike, and in the same order, throughout two independent lines of evolution?

To explain this marvelous adaptation, the law of correlation appealed to by Darwin will doubtless be quoted; but it is mere playing with words. In the case of white cats with blue eyes, which are generally deaf, we are dealing with *solidary* changes, due moreover to lesions or defects. We are not dealing with *complémentary* changes, that is, changes

so coördinated as to keep up and even improve the functioning of an organ under the most complicated shifting conditions. This coördination would be absolutely inexplicable if its sponsors were denied recourse to a mysterious principle, to a "good genius of the future species . . . to obtain the *convergence* of *simultaneous* changes, as before to be assured the *continuity of direction* of *successive* variations."

Let us assume, then, with the Lamarckians, "that variations are due not to accidental and inner causes, but to the direct influence of external circumstances. And let us see whether they provide a more intelligible scientific explanation and, if we may venture to say so, one less "miraculous."

In a hypothesis such as that of Lamarck, the formation of the eye would be attributed to the imprint of light upon the matter organized, which changes its structure and adapts it to its own requirements of form. The similarity of the two effects, in the Pecten and in man, would then be simply explained by the identity of the cause. But from the pigment-spot of the lower organisms to the eye of the higher animals there is a difference as great as there is between a snapshot camera and a com-

^{**} Pp. 68-69.

~~—~~ Pp. 75 *et seq.* Bergson refers especially to Eimer's doctrine of orthogenesis, according to which structural transformations are brought about by the continuous influence of the external on the internal, in a very definite direction, so that they could be explained by physico-chemistry alone. But then, he observes (p. 74): "it must be supposed that physico-chemistry of living bodies is such, here, that the influence of light has caused the organism to construct a progressive series of visual apparatuses, all extremely complex, yet all capable of seeing, and of seeing better and better. What more could the most confirmed finalist say, in order to mark out so exceptional a physico-chemistry?"

plete photographic apparatus. Life proceeds by insinuation; first of all it becomes passively adjusted to inert matter, preparatory to active relations with it and to action upon it later, just as an orator first of all falls in with the passions of his audience that he may command them later. The eye, and all the apparatus of locomotion inseparable from it, has not been made *by* light, but *for* it, in order that it may utilize and derive advantage from it; facts are in evidence to prove this to be the case.

If we remove the crystalline lens of a Triton we are helping onward its regeneration by the posterior epithelium of the iris. Now the latter is an offshoot of the brain, whilst the crystalline lens arises out of the general ectoderm.⁵⁵ The mechanistic explanation, that it is due to the influence of physico-chemical causes, is plainly absolutely impossible here; admitting that it might, at a pinch, account for the formation of the eye as derived from the ectoderm ~~—~~which is not the case—it would find it impossible to explain why other visual apparatus, similar in all points, should have been formed by an overflow from the brain. Here we have obtained the same effect by different combinations of causes, which proves that it is not simply a mechanistic result.

Pretending to reduce life to physics and chemistry in the desire to avoid the mysterious, has not

⁵⁵ P. 74. The conjunctival part of the iris, of mesodermic origin, is of no importance in the regeneration of the crystalline lens. The latter is due to the posterior epithelium of the iris, formed by the edge of the optic cupola, that is, derived from the brain. As the outline of the brain is very different from the general ectoderm, the fact of heteroblastia is here again absolutely incontestable, and it is enough to overthrow the almost classic theory of the specificity of blastodermic layers.

only multiplied it, but has infinitely augmented its complexity and its irrationality.

This point is clearly understood by Neo-Lamarckians, such as Cope.²² They recognize the originality of life and the corresponding insufficiency of mechanism, either external or internal, to account for it. Instead, they credit the living organism—the individual organism—with a power to adapt itself to its environment by an active, and perhaps even conscious, effort, and then to transmit the variation thus acquired to its descendants. This explanation, which carries its appeal to an inner, psychological principle of development, is quite superior to the others, and provides a rational way of accounting for the fact that a kindred effort to take advantage of the same circumstances may lead, on two independent lines of development, to the same result. Nevertheless, in certain respects, it clashes with the facts. First of all, how are we to admit that a similar effort is a characteristic of plant life? Moreover—and it is a more serious objection—although it is well established that diseases or defects can be inherited, there is no proof yet that acquired characters are transmissible.

There is no proof, for instance, that the mole has become blind because it has formed the habit of living underground; perhaps it was because its eyes were becoming atrophied that it condemned itself to an underground existence. Indeed, the domestication of certain animals, like the perfecting of certain natural aptitudes (such as fencing), appears to be due less to the inheritance of acquired habits

²² *The Origin of the Fittest* (1887); *The Primary Factors of Organic Evolution* (Chicago, 1896).

than to the growing momentum of the natural tendencies themselves, which in passing from germ to germ increase in strength on the road by reason of the continuing urge of the primitive impetus, without, moreover, always displaying the same characters. Thus the son inherits from his father not a certain characteristic, but a bent to branch off in a certain direction; he *deviates* from the normal type as his father does, but he may do so somewhat differently. Thus "he will have inherited deviation and not character."

All this suggests the presence of a much more profound effort than that of the individual, a sort of *original impetus* of life, crossing from one generation to another, not only making species definitely *diverge*, but also at the same time maintaining in them all a certain *identity* of structural development due to their common origin. Then the fact noted above, inexplicable otherwise, is quite ~~naturally~~ accounted for. The striking contrast between the infinite complexity of the structure of the eye and the extreme simplicity of its function, a contrast that proves disconcerting to the mechanists, should, on the contrary, put us on the right path and make us accept the principle of an original impetus of life. The simplicity belongs to the object itself; the complexity is only to be found in snapshot views we take from outside it, in the signs by which we try to represent it to ourselves in the act of imitating it artificially. It is the same with a picture which an artist of genius has painted upon his canvas, the same, too, with a gesture made by my hand. Realized from within, it is simple; perceived from without, it is infinitely complicated.

"Nature had no more trouble in making an eye than I have in lifting my hand." But in this movement nature has encountered resistance, just such as my hand would encounter if it had to pass through a mass of iron filings; it has displaced these obstacles, and it is the sum-total of these displaced obstacles which forms the materiality of the process. Yet the explanatory reason will be sought there in vain, that is, in the mass of iron filings and their elementary actions and reactions; it ought rather to be sought in the simple act that has thrown them into this arrangement. It is an indivisible act, an undivided movement. "Now in the hypothesis we propose," says Bergson, "the relation of vision to the visual apparatus would be very nearly that of the hand to the iron filings that follow, canalize and limit its motion." *

*Whatever may be the point at which the hand stops short, the filings instantaneously coördinate and come to an equilibrium. It is thus with vision and its organ. At whatever point the progress toward vision in a species stops short, the result obtained is necessarily complete and perfect of its kind, like the real process which has given rise to it and has no parts. If in two species remote from each other in classification and belonging to two independent branch lines of evolution, this progress toward vision has gone equally far, there will be the same visual organ and the same complexity of structure in both cases, "for the form of the organ only expresses the degree in which the exercise of the function has been obtained." ** It is the result

* Pp. 91-95.

** P. 96.

of the simple gesture that has set in motion the vital movement, and it can only be explained by it."

Of what does this gesture that life executes consist? What is this impetus which, starting from an initial impulse, proceeds along divergent lines? It shows itself by results both divergent and complementary. These results make it perceptible to the eyes of the mind and indicate the diverging paths taken by a similar evolution of life. By using these as a starting-point the way can be retraced step by step to the original movement itself, and perhaps even to the creative cause whence it proceeds.

"The cardinal error which, from Aristotle onward, has vitiated most of the philosophies of nature, is to see in vegetative, instinctive, and rational life three successive degrees of the development of one and the same tendency, whereas they are three divergent directions of an activity that has split up as it grew." "Surrendering in this respect to the monist tendency of our intelligence, which was already going contrary to the evidence of the facts, and refusing to perceive the cleft between the organic and the inorganic world which divides them, biologists also have tended to see in the organic universe, from plant to animal life, and from animal to human life, differences of degree and intensity only, but not of constitution.

"To understand the full depth and scientific precision of this simple solution, one must refer to what has been already said about the Bergsonian method of intuition, of which this is a striking application."

"P. 135.

The difference, it is true, between these groups is not so clear-cut as at first appears. There is scarcely any phase of life that is not found in a rudimentary state, either latent or potential, in all organisms. But the difference lies in the proportions, or, more precisely, in the polarization of properties common to these at their origin, which have been carried to such an extent that they become complementary in the living beings in which they are embodied. *For the definition of a group it is not enough to note its characters; we must observe which of these characters the group has a tendency to accentuate, and which develop to the extent that it does.* Now when this criterion is applied we shall not be long in distinguishing three fundamentally different groups of organisms, corresponding to three divergent developments of life, to three solutions of the problem of life.⁴¹

On the one hand, as a matter of fact, plants draw directly from mineral nature the elements necessary to maintain life, especially carbon and nitrogen,⁴² and from these they form chemical compounds which constitute organic substances; they reduce the carbonic acid in the air and effect the liberation of oxygen and fixation of carbon, by absorbing the luminous or calorific energy of the solar radiation, thus producing carbohydrates, and especially starches, thanks to the chlorophyllian function, which in the plant corresponds with the nervous system in the animal. Hence is derived the *fixity* and *insensibility* of the vegetable world, in short,

⁴¹ Pp. 116 et seq.

⁴² In the vegetable world, moreover, there is a duplication by means of which the second of these functions (the fixation of nitrogen) has devolved upon microscopic plant forms or microbes.

its *torpor*. Finding its food on the spot, in air, water, and soil, the plant has no need of movement, nor consequently, of feeling; the vegetable cell is entirely absorbed in the work of conserving its accumulated energy.

Animal forms, on the contrary, borrow from vegetable life, either directly or indirectly by means of other animal forms, the complex substances of which their life is nourished, in order finally to set free, in the form of work done at the appeal of a sensori-motor system, the energy stored up in their tissues in the form of glycogen. All proceeds, then, as if the function of the vegetable were to fabricate the explosive utilized by the animal. And this is the reason that animals, forced to go and seek their food and consequently obliged to move about in order to live, have evolved on lines of locomotor activity, and therefore of a consciousness increasingly capable of casting light upon and directing their movements.

As between these two tendencies, at once divergent and complementary, of which animal and vegetable life are representative, the second has developed most completely, as if the objective, from the very first, in the fabrication of the explosive had been the explosion. Now this development has found expression in the gradual creation of a nervous system, that is, of a releasing mechanism designed to liberate the potential energy accumulated, in well-defined directions, and in doing that to equip the living being for more and more precise adaptation of movements and a much greater latitude of choice.

But among animals themselves the on-going

movement is seen progressing in two very different directions, as can be proved by an examination of the sensori-motor apparatus in anthropods on the one hand, and vertebrates on the other, the two classes of the most mobile beings, and therefore those most capable of progress. "Behind what is seen is what may be surmised—two powers immanent in life and originally intermingled, which were bound to part company in course of growth." At the culminating point of their respective evolution, the insect world and man, the one is in possession of *instinct*, and the other of *intelligence*.

Instinct and intelligence represent two different solutions of one and the same problem, two solutions at once opposite and complementary. On the one hand instinct is something immanent in the movement of life, infallible, but limited in scope, and unconscious to the extent in which representation is crowded out by action; intelligence, on the other hand, is something exterior to life, fallible, but conscious because of the bridge crossing between representation and action, and possessing within itself a power of projection beyond itself. In the case of instinct, knowledge is more felt, lived, and acted out, whilst in intelligence, knowledge is rather thought out and depicted. The field of instinct is its bearing upon *things*; of intelligence, its bearing upon *relations*. "Intelligence, in so far as it is innate, is the knowledge of a *form*; instinct implies the knowledge of a *matter*." "This is the source of the advantage, in one respect, of instinct over intelligence. That advantage consists in knowing from within, through sympathy, in a direct and

concrete manner, the individual thing to which it relates and the living agent that works it. Thence are derived the amazing precision and unerring accuracy exhibited in the movements of the paralyzing wasp (when not circumvented), which stings its victim so as to render it motionless without killing it; or those of the little beetle called *Sitaris*, which lays its eggs at the entrance of the underground passages dug by the *Anthophora*, so that its larva clings to the male, and passes from it to the female during the "nuptial flight". Then it installs itself in one of her eggs, devours it, floats upon the honey by the aid of the shell, and is there transformed into a perfect insect. Everywhere instinct is perfect and simple, although its operations are diversified. If the element of sympathy, which is its very essence, could extend its object and reflect upon it, it would give us the key to the workings of life. But that it cannot do; there, a decisive advantage is gained by intelligence."

Indeed, while intelligence knows things from a post of observation without and cannot act upon them save by utilizing first inorganic agencies, and then artificial tools which it fabricates itself—in this sense we might define our own species as *homo faber*—yet its formal knowledge, instead of limiting itself to what is practically useful, may be applied to an indefinite number of things, and even to those which serve no purpose; the signs also which it employs, instead of clinging to their object, as in animal life, are mobile signs which lend themselves to a knowl-

"Bergson has always laid stress upon the fact that his doctrine is not to be interpreted as giving instinct the advantage over intelligence, as many, after a superficial examination of it, seem inclined to do.

